

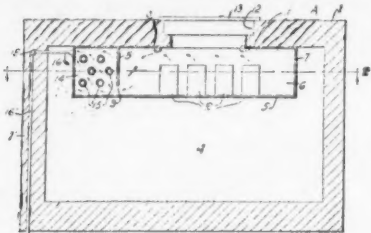
LATEST PATENTS IN REFRIGERATION FIELD

(Concluded from Page 7, Column 5)

of an endless pneumatic tube forming an opening and comprising a seat-forming portion projecting into said opening, and an upstanding portion adapted to embrace a seated member.

1,812,170. REFRIGERATING APPARATUS. Frederick W. Rabe, St. Louis, Mo., assignor to Anheuser-Busch, Inc., St. Louis, Mo., a Corporation of Missouri. Filed Sept. 13, 1929. Serial No. 392,289. 5 Claims. (Cl. 62-91.5.)

1. A refrigerating apparatus comprising a housing providing a refrigerated compartment, a refrigerant chamber within said refrigerated compartment arranged to receive a refrigerant of the solidified gas type which gives off gas on sublimation, a gas chamber disposed adjacent to said refrigerant chamber and likewise located within said refrigerated compartment, said gas chamber being in communication with said refrigerant chamber whereby gas resulting from sublimation of the refrigerant may pass from the refrigerant chamber into the gas chamber, means for discharging gas from said gas chamber, a conduit extended



1,812,170

through said gas chamber and disposed in the path of gas moving therethrough, said conduit being arranged in communication with said refrigerated compartment so as to provide a passageway for air within said refrigerated compartment.

1,812,306. INSULATING MATERIAL. Arthur J. Russ, Oakdale, Pa., assignor to Armstrong Cork Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 8, 1926. Serial No. 107,790. 17 Claims. (Cl. 106-18.)

1. An insulating material comprising a mixture of an alkaline earth, diatomaceous earth and an exfoliated vermiculite mineral.

1,812,356. HUMIDIFIER. Bertram M. Mills, Pawtucket, R. I., assignor to The Standard Engineering Works, Pawtucket, R. I., a Corporation of Rhode Island. Filed Nov. 5, 1927. Serial No. 231,265. 18 Claims. (Cl. 261-91.)

1. A humidifier having a basin-like base provided with a screw-threaded hollow boss for engagement with a supporting water supply pipe, a cylindrical grid seated on edge in said base, a cover member mounted on the grid, said cover having a series of circumferentially spaced marginal openings, a motor above the cover, the motor having a normally vertical shaft extending down through the cover, an atomizing disk on the shaft below the cover, the edge of the disk being in a plane intermediate the top and bottom of the grid, an annular deflector having its inner edge adjacent to the outer surface of the grid, and a fan on the motor shaft above the cover arranged to deliver air through the openings in said cover and also against the deflector.

1,812,777. COMBINATION ICE-BOX AND WATER COOLER. Sidney W. Frechou, New Orleans, La. Filed Sept. 27, 1930. Serial No. 484,898. 2 Claims. (Cl. 62-79.)

1,812,803. ICE RACK FOR REFRIGERATORS. Frederick B. Ranney, Greenville, Mich., assignor to Ranney Refrigerator Co., Greenville, Mich. Filed Sept. 24, 1930. Serial No. 484,160. 5 Claims. (Cl. 62-69.)

1,812,826. LOCK FOR BOTTLE REFRIGERATORS. Chester A. Frick, Muncie, Ind., assignor to Glascock Bros. Manufacturing Co., Muncie, Ind., a Corporation of Indiana. Filed June 21, 1929. Serial No. 372,774. 2 Claims. (Cl. 292-1.)

1. A locking device for dispensing cabinets having hinged covers, comprising a rectangular frame adapted to lie on the cover of the cabinet, a pair of holding bars pivoted to each of two sides of said frame and adapted to extend downwardly to a point below the bottom of the cabinet and a retaining rod adapted to be passed through the bottom ends of said holding bars.

FERRO EXTENDS FACILITIES

CLEVELAND—The Ferro Enamel Corp. of Cleveland, Ohio, has extended its research facilities by installing apparatus for measuring opacity of enamels.

Specialized FORGINGS

for every Electrical REFRIGERATION NEED

DETROIT FORGING

Company
Detroit Michigan
Member of Detroit Business Pioneers

Service Engineers Meet to Talk Shop



Engineers of several manufacturers met for luncheon during the N. E. L. A. convention at Atlantic City. Left to right: H. M. Threlkeld, Majestic; F. M. Corliss, General Electric; J. T. Schaefer, Electric Refrigeration News; W. K. Gordon, Westinghouse; W. M. Timmerman, General Electric; F. J. Corneil, Majestic; H. T. Hulett, General Electric; and S. R. Cooper, Servel.

New G. E. Solenoid Valve Controls Brine Flow

SCHENECTADY, N. Y.—A new solenoid-operated valve, designated CR-9507-A1, for controlling liquids and gases under pressure has been announced by the General Electric Co. Some of the uses for which the new valve is designed are: for operating steam or air whistles, for controlling the flow of brine through cooling pipes in cold storage rooms, for remotely or automatically controlling the supply of oil or gas to furnaces, for automatically controlling the flow of liquids in connection with weighing machines, and for controlling the flow of water in cooling jackets on compressors.

The valve body is made in two castings, with the upper section fastened to the lower by bolts. The threads for the pipe connection are standard pipe threads. An arrow on the upper body casting indicates the direction of flow. The gland connected to the operating mechanism is of the rotary type which reduces the friction load. The seat and poppet are carefully ground to fit and only high-grade materials, suitable for

liquid or gas that is to be controlled, are used.

The valves can be made normally open or normally closed, in the field, by drilling the mounting holes in the case and transferring the solenoid and operating mechanisms to the opposite side. The valves are of the unbalanced type. A standard solenoid is used.

A sheet-metal case with a hinged cover encloses the solenoid and operating mechanism. Suitable knockouts are provided in the case for conduit connection.

Metal Stampings Unit Bases and Guards

Household Refrigerator Metal Panels—Exterior or Inside Panels and Food Compartments. Louvered Panels—Special Trays or Panels—Water Cooler Panels.

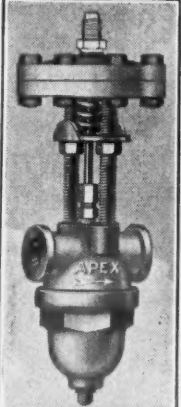
MOTORS METAL MFG. CO.
5936 MILFORD AVE. DETROIT, MICH.

RALPH HOFFMAN IS ELECTED LINK-BELT VICE PRESIDENT

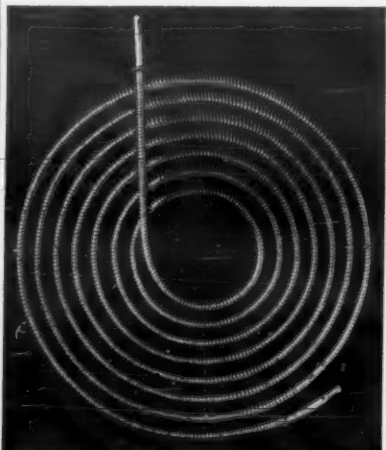
SAN FRANCISCO—Ralph M. Hoffman, for eight years manager of the Seattle office of the Pacific division of Link-Belt Co., has been appointed vice president and sales manager of that division, with headquarters here. He succeeds Harold H. Clark, who retired June 1.

APEX Automatic Refrigeration Specialties

Expansion Valves, Pressure Control Water Regulators, Gas Pressure Regulators, and Water Pressure Regulators.



APEX REGULATOR COMPANY
DIVISION OF
FISHER GOVERNOR COMPANY
MARSHALLTOWN, IOWA

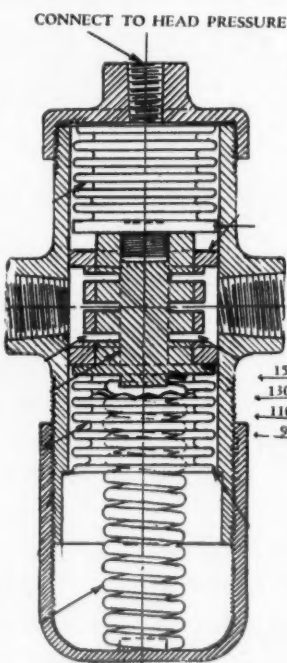


Specify ROME-TURNEY CONDENSERS

Made of heavy gauge deoxidized seamless copper tube. One-piece construction. High efficiency. Designs for all requirements and conditions.

Rome-Turney Radiator Co.
ROME, N. Y.

Amreco Pressure Control Valve



SLIDE ACTION VALVE

It prevents the blowing of fuses from overloaded systems at starting.

It prevents breaking down of base and system oil and carbonizing of system. It prevents ruptures of lines, blown gaskets, distorted valves in compressing part of system.

It prevents burning-out of motors from excessive load to be pulled.

It prevents the scoring of bearings and seized parts caused by broken down oil or excessive heat.

It permits the use of smaller drive equipment due to the elimination of all chance of overload.

It insures full automatic operation under any and all conditions with the positive assurance of safety without interruption of refrigeration.

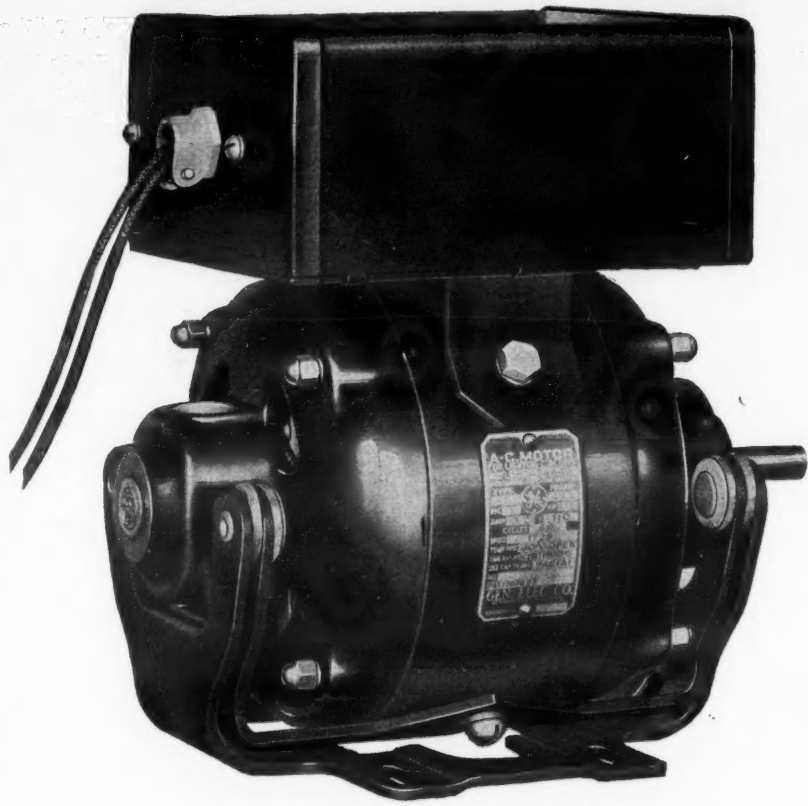
It requires no attention, works automatically and controls perfectly as set. It is adaptable to any refrigerant and may be set for any desired pressure. It may be installed in a few minutes by any service man.

American Refrigerator Car Company

252 HALEYON ARCADE NO. 4
MIAMI, FLORIDA

Patented April 8, 1931

An achievement of interest to manufacturers and users of electric refrigerators



G-E CAPACITOR-MOTOR TYPE KC

SIMPLE in construction, the G-E capacitor-motor has no commutator, no collector or brushes. Because of this simple, squirrel-cage construction, its operation is extremely quiet. It is the outstanding motor drive for the home electric refrigerator.

In addition to this complete capacitor-motor power unit, General Electric also has available a complete line of fractional-horsepower motor parts for general use in direct-connected refrigerators in which the motor parts may be subjected to the action of the refrigerant. These motor parts, consisting of stator and rotor, are available in horsepower ratings of 1/10, 1/8, 1/6, 1/4, 1/3, 1/2, and 3/4 hp. They are intended for mounting directly in the compressor unit.

Back of the Type KC capacitor-motor — back of these motor parts — are all of the facilities of General Electric. These products are the result of nearly thirty years of successful fractional-horsepower motor design, manufacture, and application — proved, dependable. Why not ask your nearest G-E office to give you complete information?

OUTSTANDING FEATURES

1. Simple construction, having no commutators or brushes
2. High starting and pull-up torque
3. Unusually quiet operation
4. High efficiency, resulting in lower operating costs
5. Reliable operation for long periods

GENERAL  ELECTRIC

TO BE ISSUED WEEKLY
BEGINNING SEPT. 9

Merchandising Section

IN THREE PARTS
PART ONE

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS
VOL. 5, No. 24, SERIAL No. 126

Copyright, 1931, by
Business News Pub. Co.

DETROIT, MICHIGAN, JULY 29, 1931

Entered as second class matter
Aug. 1, 1927, at Detroit, Mich.

FIFTEEN CENTS PER COPY
TWO DOLLARS PER YEAR

SALES CONTESTS GATHER MOMENTUM

TRIP TO FACTORY GOAL IN SERVEL SALES CONTEST

Winning Salesmen Will
Visit Evansville
In September

EVANSVILLE, Ind.—Serval dealers throughout the United States are now in the midst of a race with "Old Man Quota" for a free trip to the Serval factories here in September.

Only Serval dealers or pre-determined representatives of dealer organizations are eligible for the trip. Special contest quotas have been given to each dealer by his distributor.

Before an order for a Serval Hermetic electric refrigerator is considered as counting on the quota score, a dealer must install a refrigerator by the close of the contest, or must receive a cash payment on a unit.

For dealers making their quotas, Serval Sales, Inc., will pay all train and pullman expenses to Evansville from any point in the United States, as well as all hotel expenses during the two-day stay in the city.

Dealer guests will make an inspection tour through the 29-acre plant, will

(Concluded on Page 4, Column 4)

SUNBEAM ELECTRIC TO BUILD ADDITION

EVANSVILLE, Ind.—Contract was let July 21 by the Sunbeam Electric Mfg. Co., manufacturer of Sunbeam electric refrigerating machines, for construction of a building addition to cost about \$40,000.

The building will be used largely to provide improved facilities for the manufacture of Sunbeam units which are built according to the Roto-Rite patent.

The structure will be of modern type steel construction enclosed by brick walls and concrete floors. It will consist in part of two stories and provide about 25,000 sq. ft. additional to present operating area.

The new building will not be used for production until January 1, William A. Carson, president, stated.

Majestic Dealers Open Meeting In Chicago

CHICAGO, July 29—Majestic distributors from all parts of the United States will convene at 10:30 o'clock this morning for the opening session of a two-day convention, at which plans and policies for the coming season will be outlined and discussed by executives of the Grigsby-Grunow Co.

All district officials of the company met here yesterday with V. W. Collamore, general sales manager, to become familiar with plans for the convention.

E. J. Grigsby, president of the company, will open the session this morning with the convention's keynote address, in which he will sketch plans for the fall-and-winter period of sales.

Detailed explanation of the plans will follow the address as department heads and other executives speak. Mr. Collamore

(Concluded on Page 4, Column 3)

GREEN MAKES FIRST SALE IN NORGE RACE

DETROIT—By selling a Norge electric refrigerator at 12:10 o'clock on the morning of July 15 in a hotel lobby and delivering the unit 20 minutes later, L. A. Green of Kansas City received the first Pacemaker badge issued in the Norge Rollator Marathon Sales Contest which opened July 15. The badge is worn by all salesmen having made their first sale in the contest.

More than 6,000 salesmen are registered in the campaign, whose slogan is: "Step Ahead." The drive is dedicated to the Norge marathon rollator—a standard unit which has been in operation at the factory here since 1927.

When Norge salesmen make their second contest sale, they receive from the factory a recognition pencil. Prizes of respectively increasing value are awarded to salesmen for each additional sale.

Factory shipments of Norge electric refrigerators for the first 22 days of July were approximately 500 per cent greater than shipments made during the entire month of July last year, according to a report issued by Howard E. Blood, president of the Norge Corp. here.

"This increase during one of the so-called ebb months means to us," said Mr. Blood, "that electric refrigerators can be sold every month of the year if the proper effort is expended."

COPELAND SALES FORCE BATTLES FOR CASH PRIZES

Gold Purses For Five
Leading Salesmen
In Campaign

MT. CLEMENS, Mich.—Salesmen of Copeland electric refrigerators throughout the country are now engaged in a sales contest which opened July 20 and will close September 30.

Prizes for the five highest salesmen are bags of gold, ranging from \$300 down to \$50, plus merchandise of all descriptions, such as home furnishings, electric appliances, traveling equipment, jewelry, sporting goods and presents for the children.

The units in the contest are ice cubes, a certain number of ice cubes being placed to the salesman's credit for the sale of Copeland household models, commercial units, and water coolers. Any salesman who amasses more than 120 ice cubes is eligible for a merchandise prize and is in the running for the cash prizes.

Apartment house sales do not count in the contest unless they are sold at list; and sales of commercial coils are excluded from the contest. It is wholly a retail sales contest.

One of the contest rules is that the

(Concluded on Page 4, Column 4)

Distributors Meet

MT. CLEMENS, Mich., July 29—A convention of approximately 100 Copeland distributors from every state will be held today at the factory.

This will be a distributor convention only and will not be attended by dealers and salesmen. A dinner will be given for the conventionites at the Gowanle Golf and Country Club.

Plans and policies will be outlined for maintaining increased sales volume during the remaining four months of the fiscal year.

W. D. McElhinny, vice president in charge of sales, will preside. Others who will address the convention are: Louis Ruthenburg, president, Copeland Products, Inc.; Edwin H. Brown, vice president in charge of finance; C. W. Hadden, sales manager; Ralph M. Douglass, advertising manager; Harry Newcomb, manager service department; Kenneth Baxter, president, Copeland Refrigeration Co. of New York; and H. T. Kessler, president, Copeland Refrigeration Co. of Chicago.

MINNEAPOLIS GAS CO. STARTS ELECTROLUX CAMPAIGN

MINNEAPOLIS, Minn.—Jubilant over the sale of 90 Electrolux refrigerators during the month of April, the Minneapolis Gas Light Co. is now staging an energetic 60-day sales drive on the Electrolux refrigerator.

A minimum quota of 200 refrigerators has been set as the goal. As special inducements "factory trips" to Evansville have been offered to the leading salesmen with all expenses paid.

Share Earnings of \$5.10 Reported By Copeland

MT. CLEMENS, Mich.—Consolidated profits of Copeland Products, Inc., for the first eight months of the current fiscal year, beginning Nov. 1, 1930, and ending June 30, are \$265,628.20 after provision for depreciation and Federal taxes, Louis Ruthenburg, president of the company announced today. This is \$5.10 per share on the 52,072 shares outstanding.

"The ratio of current assets to current liabilities is 3.6 to 1, as compared with 1.7 to 1 of the same date last year," Mr. Ruthenburg's report states.

"There are no senior securities, funded indebtedness nor bank loans, whereas on June 30, 1930, there were outstanding bank loans of \$350,000.

"Cash on hand as of June 30, 1931,

(Concluded on Page 4, Column 2)

FRIGIDAIRE JUBILEE SALES INCREASE 46.9%

DAYTON, Ohio — Complete reports from all sales districts covering the first 20 days of July and incomplete reports from many which include the fourth week of the month indicate that Frigidaire's fifteenth anniversary jubilee is proving the most successful summer sales campaign in the history of the company, according to H. C. Jamerson, campaign manager.

Household sales for the first part of July were 46.9 per cent above those for the corresponding period of July, 1930, it was reported, and August production has been stepped up to 73 per cent above that of last August to meet the demand during the remaining month of the jubilee.

"Fully 1,000 more dealers are using this campaign than participated in any sales drive we have used," declares Mr. Jamerson.

"We are finding that the jubilee drive is being staged during 1931's most opportune time. With it we are extending the heavy electric refrigerator selling season from June through July and August.

"Frigidaire jubilee gifts are proving very effective in selling the larger models in our line. An attractive offer is made to all prospects who purchase a large model during the campaign."

The campaign is being conducted in military style, with titles ranging from captain to general.

WESTINGHOUSE TO INTRODUCE NEW MODELS IN DRIVE

'Build A Refrigerator'
Contest Opens
Saturday

MANSFIELD, Ohio, July 29—Saturday morning will open a two-month electric refrigeration sales contest in which all Westinghouse retail salesmen in the country may win merchandise prizes for units sold. The campaign will officially introduce two new Westinghouse models, WL-65 and WL-85.

The contest is under the supervision of George W. Moister, manager of refrigeration sales promotion, and has been termed the "build-a-refrigerator contest."

Sale of any refrigerator entitles the salesman to mark up a definite addition to the phantom refrigerator which he is building. The first sale, even of the smallest model, the WL-45, constructs the legs of the unit; the next sale installs the shelving, etc.

Each salesman will endeavor to build as many refrigerators as possible, complete with flower-or-fruit bowl on top,

(Concluded on Page 4, Column 5)

APEX CONDUCTS TWO PROMOTION CONTESTS

CLEVELAND, Ohio—Two sales promotion contests are being conducted by the Apex-Rotarex Corp. here, makers of Apex electric refrigerators and other household appliances—the One Hundred Per Cent club's first anniversary jubilee for dealers and salesmen, and the district manager's heavyweight contest.

The first contest, started in July to continue until Sept. 1, is intended to increase sales in what is usually a slump period. The heavyweight watch, extending from June 15 to Aug. 31, has as its prime aim, the securing of 500 new Apex dealers.

The jubilee centers around the payment of cash bonuses to Apex dealers and salesmen. Throughout the entire

(Concluded on Page 4, Column 1)

General Electric Blimp Race Won By George Patterson

CLEVELAND—George Patterson, Inc., Florida refrigerator distributor, finished first in the General Electric transcontinental blimp race—a refrigeration sales contest—with a sales record of 152 per cent of quota, according to compilations made at company headquarters here.

The National Electrical Supply Co. of Washington, D. C., having a score of 133 per cent of quota, was second in the sales contest—so close to George Patterson that it took the tabulating crew several days to decide just who did win the race.

Finishing third in the drive with 122 per cent of quota was Rex Cole, New York City distributor, while George Bauder of San Diego, Calif., with 115 per cent of quota to his credit, closed the race in fourth place.

W. N. Hogan, Wheeling, W. Va., distributor, took fifth place, and F. B. Connelly, distributor in Billings, Mont., finished sixth. Both distributors had

scores of more than 100 per cent of quota.

In a junior blimp race for dealers, held in Mr. Patterson's territory, more than 12 dealers realized sales totalling more than 200 per cent of quota.

STARR FREEZE SELECTS INDIANA DISTRIBUTOR

INDIANAPOLIS, Ind.—Pearson Piano Co. of this city has been appointed distributor of Starr Freeze electric refrigeration for central Indiana, covering a territory of 26 counties.

Cleveland Wins Kelvinator Contest; New York Second

DETROIT—Cleveland branch won the June Kelvinator factory branch contest which ended June 30, it has been announced.

The Cleveland branch, of which W. F. Worrell is the manager, showed a gain

of nearly 100 per cent over June, 1930. Substantial gains were also made over May, 1930.

The New York branch finished second while the race between the Detroit and Boston branches for third place has been so close that it has not as yet been determined which branch has won that place.

The contest as a whole was regarded as a success with each of the branches showing gains ranging from 15 to 100 per cent over the same month of the previous year.

The winning branch will be entertained at the \$500 "party" to be sponsored by officials of the Kelvinator Corp., for which the various branches contested.

Competition in the contest was stimulated by a system of sponsoring in which each of the branches took a factory executive for a sponsor. A constant system of reporting the progress of the contest also abetted the competition.

MAYFLOWER NAMES NEW ORLEANS DEALER

NEW ORLEANS—The Shuler Supply Co., distributor for the Crosley Radio, has taken over the agency for the Mayflower electric refrigerator.

AND NOW! EVERY WEEK!

Electric Refrigeration News will be issued every Wednesday, beginning September 9. See editorial column on page 8 for further information. Subscription rates will be increased. Order now, take advantage of the old price—\$2.00 per year.

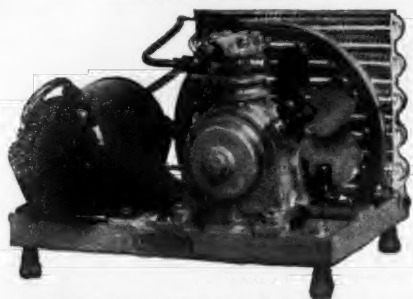
ICE-O-MATIC DISTRIBUTOR ON EUROPEAN TRIP

OMAHA—William H. Schmoeller, president of the Schmoeller & Mueller Piano Co., distributor for Ice-O-Matic in the Omaha territory, is now in Germany, where he will spend two months.



—PRODUCTS—

**A SERVICE TO THE
REFRIGERATION
INDUSTRY**



Model 400, 1-6 H.P. Single Cylinder
Condensing Unit

**PRECISION BUILT COMPRESSORS and
COMPLETE CONDENSING UNITS**

**for Electric Refrigeration Manu-
facturers, Distributors and Dealers**

Our plan allows the assembler to advertise and sell under his own name. Sizes for 1/6, 1/4 and 1/3 H. P. Also commercial sizes up to 3 H. P. Air and water cooled. Sulphur dioxide and methyl chloride condensing units. Ideal for domestic refrigerators, ice cream cabinets, water coolers and small commercial installations. Prices lowest in the history of electric refrigeration. Full details given on request.

**Deissler Machine Company
Greenville, Pa.**

New York Office, 15 Moore Street
Manufacturers of complete domestic and
commercial refrigeration systems

Learning Servel Salesmanship



Commercial dealer and distributor personnel of the Pattinson Electric & Supply Co., Servel distributor at Hutchinson, Kans., met for a sales conference recently in that city. S. R. Cooper, Servel factory representative, was in charge of the meetings.

Atlas Cement Cooled By Frigidaire

WACO, Tex.—Water used for testing of cement in the plants of the Universal Atlas Cement Co. here is kept cooled within narrow temperature limits through means of electric refrigeration.

Three Frigidaire compressors and nine T-200 tanks provide as high as 75 gallons of 50 degree water an hour.

This cooled water is delivered to six special tanks.

WASHINGTON SALESMEN VISIT GENERAL ELECTRIC

WASHINGTON, D. C.—(UTPS)—Ten leading refrigerator salesmen of the National Electrical Supply Co., left Washington Wednesday, July 15, for Schenectady, N. Y., for a two-day visit to the General Electric Co. plant.

The salesmen were given the trip by the Washington concern, distributor for General Electric refrigerators and other G. E. products.

During the campaign, 2,150 General Electric refrigerators were sold by the National Electrical Supply Co.

Flowers, Chorus Girls, Refrigerators

SEATTLE, Wash.—Coast Radio Co., Mohawk refrigerator distributor, won first prize in the Fourth of July parade here with a float decorated with flowers, chorus girls, and electric refrigerators.

This is the second consecutive time the distributor has won first prize in the parade.

NORGE SALESMEN DISCUSS SALES AT DISTRICT MEET

CHARLESTON, W. Va.—Sales methods were discussed at a conference attended by 65 salesmen and a number of officials of the Norge Corp., held at the Kanawha hotel. Salesmen represented dealers in southern West Virginia, southern Ohio, eastern Kentucky and southwest Virginia.

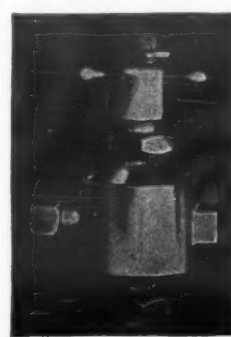
"Selling the Norge" was the subject of a talk by J. E. Oliphant of Marion, O., district representative. John T. Morgan, sales manager of the Charleston Electrical Supply Co., Norge distributor in this district, welcomed the salesmen to the city.

Officials of the Norge Corp. here included: L. H. Darbyshire, cabinet engineer, and Dewey Karkanan, field service representative, both of Detroit; and O. J. Blake, Milwaukee, representing the Cramer-Krasselt Co., advertising agency for Norge.

PUBLICITY MANAGER HEADS WESTINGHOUSE STORE

LOUISVILLE, Ky.—Tom Mason, publicity manager of Westinghouse refrigerators for Tafel-Williams, has been appointed manager of the Westinghouse refrigerator store here.

"EBCO" AUTOMATIC • SELF CLOSING STREAM CONTROL VALVES



•save water•eliminate squirting•control height of drinking stream by automatically regulating the flow under all fluctuating pressures between 20 and 120 lbs.

EBCO Valves as shown above are standard on all EBCO Water Coolers and Fountains. A special regulator for installing in waterlines to all types of fountains may be had by asking for model C-1500. Write for our complete catalog "S".

**THE D. A. EBINGER SANITARY MFG. CO.
COLUMBUS, OHIO**

Manufacturers of EBCO Drinking Fountains, Ventilated Urinals and Closets, Round Wash Sinks and Steel Compartments for toilet rooms.

HAROLD L. SCHAEFER HAS HIS OWN IDEAS

By Elston D. Herron

MINNEAPOLIS—In times like these, Harold L. Schaefer, president of Harold L. Schaefer, Inc., distributor of Universal Cooler refrigeration in Minnesota and a part of Wisconsin, uses no newspaper advertising, radio broadcasts, home demonstrations, or direct mail campaigns. He says: "They are the bunk."

He has his own ideas on how to conduct a refrigerator distributing organization, and in the time since May, 1930, when he ordered one electric refrigerator, Model 14, his business has grown until, during the months of April and May of this year he sold four carloads of household and commercial units. A staff of 32 makes up the organization.

Mr. Schaefer employs 11 salesmen, dividing them into two divisions—wholesale and retail. The wholesale manager is given a straight salary, car maintenance, and a bonus on certain quotas. The retail manager works on a like basis.

The remaining salesmen work on a commission basis. None of them have exclusive territories. The entire sales force is divided into teams, and each month brings for them a new contest, the three winners receiving prizes in gold. Mr. Schaefer's one comment on these contests is that "money talks."

Every Monday night at 7 o'clock, salesmen meet to discuss their problems together, and take on a new supply of pep.

Following his statement wherein he deplored the use of advertising or demonstrations in selling electric refrigeration, Mr. Schaefer says, "We are satisfied that we can employ a man for \$200 a month and have his undivided attention for the full 30-day period, and unless he is muscle-bound between the ears he will sell something."

"I have yet to find any publication which would guarantee one sale for a \$200 advertisement. We sell our merchandise purely by personal contact. No spectacular stunts or advertising programs have ever been used."

Questioned upon the firm's activity in selling refrigeration during the six or eight weeks of sub-zero weather here during the mid-winter season, the president states that there is much opportunity for work in the commercial field, that there are new contracts to be made, and that the concern never loses sight of the fact that it is always summer time in the kitchen.

Until he decided to take over the business of selling electric refrigeration, Mr. Schaefer was a distributor of motor cars here. In addition to household and commercial refrigerators sold, the company's salesmen have placed 432 ice cream cabinets.

Although the territory is considered rather poor financially, the Schaefer corporation has established several Universal Cooler dealers in Minneapolis, and has located dealerships in Superior, Wis.; Rochester, Minn., and St. Paul, Minn.

PACIFIC COAST MAYFLOWER DEALERS NAMED

LOS ANGELES, Calif.—Within the last few weeks, Kierulff & Ravenscraft, electrical supply house, state distributor for Mayflower refrigerators, has added the following to their dealer list:

Holzwarner Department store, San Diego; George Reynolds Department store, Riverside; Modern Music Stores with branches in Glendale and Pasadena; B. Stark Furniture Co., Los Angeles; and A. Wild Department store, Bakersfield.

FARNY, MOHAWK PRESIDENT, ILL.; CONDITION BETTER

NEW YORK—Eugene R. Farny, president of the All-American Mohawk Corp., manufacturers of Lyric radios and Mohawk refrigerators, has been confined to his bed since the R. M. A. show in Chicago, due to a throat infection.

His condition is greatly improved.

G. E. REFRIGERATOR GIVEN AWAY AT GAME

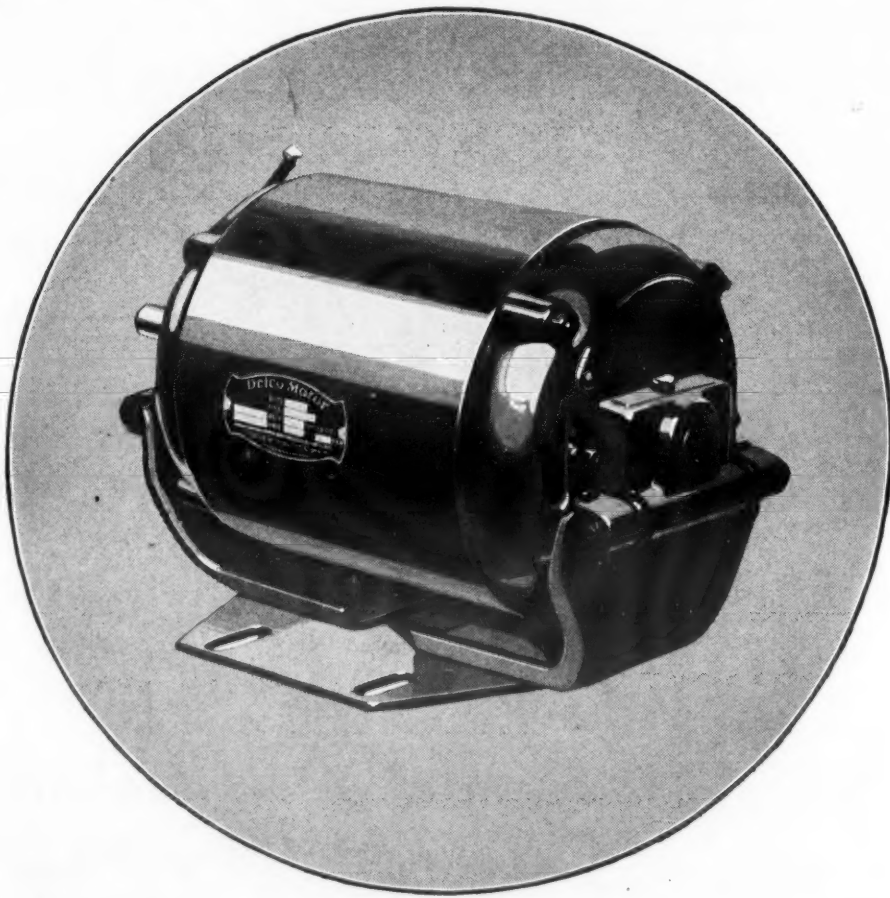
ST. LOUIS—(UTPS)—One of the prizes given away at the annual tuberculosis day baseball game played by the St. Louis Cardinals was a General Electric refrigerator donated by James & Co., distributor.

WE BUY
New and Used **ELECTRIC**
REFRIGERATORS
In Any Condition

Phone, Write or Wire All Details,
Type of Motor, Size of Box, Etc.

KASKEY & QUINN, Inc.
525 Arch Street Philadelphia, Pa.

A REFRIGERATOR MOTOR IS DIFFERENT



A refrigerator motor works every day of the year. It must not fail—even a brief interruption may result in the spoilage of food and the loss of good-will—may necessitate a costly service call. That is why Delco engineers have been particularly careful to design for trouble-free service; that is why Delco manufactures with extreme precision, and tests every motor thoroughly. In every detail, Delco Motors are expressly engineered to meet the special requirements of refrigerator service. They are quiet and remarkably free from vibration. They are long lived. They require practically no attention. More than two million in use today are attesting to their dependable construction.

National distribution for Delco Motors is provided
through the facilities of United Motors Service branches

DELCO PRODUCTS CORPORATION, DAYTON, OHIO

DEALER SUPPORT

that helped Build a Million Sales

in less than 4 years



Sliding Shelves bring food in easy reach; exclusive with General Electric.

Sanitary Super-Freezer, clean, gleaming porcelain; everything simple, sanitary, efficient.

All-Steel Cabinets, porcelain lined interiors are acid and stain resisting.

Monitor Top, mechanism sealed-in-steel, never needs attention—not even oiling.

THIRTY-FOUR national magazines with a total circulation of nearly 20,000,000 carry General Electric Refrigerator advertising. 2236 local newspapers and thousands of outdoor billboards tell the Monitor Top sales message over the local dealer's name. This year alone, 957 million individual sales messages will be used to help put General Electric sales quotas over the top.

In addition General Electric backs the Monitor Top with one of the most powerful and comprehensive sales promotion plans ever placed behind a merchandising effort. Colorful year 'round mailings to household prospects. Effective radio programs. Store and window displays. Specific direct mail campaigns to architects, builders, grocers, hospitals, schools, apartment house owners, factory

managers, restaurants for both domestic and commercial refrigerators and for water coolers. Special local campaigns to promote sales. General literature and advertising novelties.

The Silent Hostess Magazine, a monthly publication of high merit, reaching a half-million readers. The "Sales Brooder", a series of films visualizing the advantages of General Electric ownership in language every housewife understands. Special training for salesmen including a correspondence course and slide films that show how to close sales. Local and national prize contests and sales conventions. Every proven form of pro-

motion generously applied in intelligent sequence . . . aimed at one goal . . . *building sales!*

Backing a product of outstanding mechanical superiority—proved by the greatest performance record in refrigeration history . . . General Electric's continuous active, aggressive dealer support has helped achieve an unprecedented sales record . . . a million sales in less than four years.

General Electric rides the crest of an ever mounting tide of public acceptance. Selling is easier. Sales stay sold. Profits are protected against service expense by a 3-year Guarantee.

General Electric Company, Electric Refrigeration Department, Section D F 73, Hanna Building, 1400 Euclid Avenue, Cleveland, Ohio.

Join us in the General Electric Program, broadcast every Saturday evening, on a nation-wide N. B. C. network.

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

DOMESTIC, APARTMENT HOUSE AND COMMERCIAL REFRIGERATORS · ELECTRIC WATER COOLERS

APEX CONDUCTS TWO PROMOTION CONTESTS

(Concluded from Page 1, Column 5)
year, any member of the One Hundred Per Cent Club—an Apex dealer-salesman pep organization—may secure a bonus of \$50 each time he makes a total in sales points of 100, each Apex product entitling him to a specified number of these points.

During the jubilee, however, the number of points for the sale of any product has been increased, making the 100 mark easier to reach. There is no limit placed on the number of \$50 bonuses a salesman or dealer may collect.

In addition to each bonus he collects, he will receive a medal of honor from the company.

Winners in the heavyweight contest among district managers will receive prizes totalling \$1,300. To qualify for one of the 16 cash prizes, a district manager must sell a specified number of Apex products, and must obtain at least six new Apex dealers.

Prizes will be awarded by the point system. Securing a new dealer, who has not handled Apex appliances since Dec. 31, 1930, and who orders not less than three Apex units, will entitle a district manager to 100 points.

If a new dealer orders the full Apex line (refrigerators, washers, ironers, cleaners), his district manager gets 150 points. In addition, the sale of any Apex appliance adds to the score by a specified number of points.

To the first district manager who achieves his quota, an award of \$50 will be given. To the division manager having the largest number of prize winners, a cash prize of \$50 will be presented.

Prize-winners in the whole contest will be divided into four classes—heavyweights, middleweights, welterweights,

Share Earnings of \$5.10 Reported By Copeland

(Concluded from Page 1, Column 4)

was \$220,402.72, as compared with \$167,647.96 as of the same date a year ago.

"Sales for 1931 have surpassed all previous records by a substantial margin. This is true of both household and commercial lines. Export sales are also materially increased," states Mr. Ruthenbur.

"While sales for the balance of the fiscal year, following usual seasonal tendencies, will, of course, taper off, sales for July are considerably above those of the same month in 1929 and 1930.

The unusually favorable position of the electric refrigeration industry probably is due to the fact that as a result of several years of intensive pioneering work it has now reached the stage of very general public acceptance.

"It probably will be many years before the market can be initially satisfied. This is true because only a relatively small percentage of homes are now equipped with electric refrigeration. Also, there are many homes not yet provided with electricity, and as these are wired an enlarged market will be opened to electric refrigeration."

and lightweights, each class to have four prize winners.

As an added touch of "ginger," the month of July is called "Vice President's Month," and August will be "President's Month."

The four district managers leading at the end of July will receive an autographed photograph of R. J. Strittmatter, vice president of the company. A photograph of C. G. Frantz, president, will be given to the four leaders at the end of August.

MAJESTIC DEALERS CONVENE IN CHICAGO

(Concluded from Page 1, Column 2)

more will present the new fall radio line and discuss sales. R. J. Arnold, chief radio engineer, will then give a technical explanation of the new models.

After a luncheon in the Gold Room of the Congress hotel, Don M. Compton, executive vice president and general manager, will speak on new phases of the company's organization, and will introduce W. G. Pierce, Jr., new assistant to the general manager.

Five-minute organization talks will be given by H. C. Kranz, vice president in charge of engineering; R. C. Roling, production manager; Mr. Arnold; Dr. C. Marvin Blackburn, chief engineer of the tube division; and H. C. Haimbaugh, chief engineer of the refrigeration division.

Plans for advertising Majestic products during coming months will be discussed by Duane Wanamaker, vice president in charge of advertising. This address will be followed by more five-minute talks by R. S. Erlandson, E. L. Hadley, M. W. Thompson, and Frank Chemelick.

In another speech, Mr. Collamore will talk on "Quotas, Orders, Deliveries, and Policies."

Tomorrow morning will be occupied with addresses and discussions on Majestic refrigerators. President Grigsby will talk on refrigeration policies and merchandising, and H. M. Pauley, service manager, will discuss service problems in general.

Five-minute talks will be given by R. R. Trimarco, secretary and assistant treasurer; J. T. Bristol, assistant treasurer; R. E. Shadley, credit manager.

The afternoon will be taken up with a discussion on auto radio merchandising by H. E. Carl, and a round-table discussion by distributors on all phases of the approaching sales season.

Copeland Salesmen Seek Prizes in Contest

(Concluded from Page 1, Column 3)

orders must have a specified installation date before Nov. 1. Individual sales are reported at the end of each week by the dealers to distributors.

According to the plan of the Copeland Sales Co., the winners of the five cash awards will be announced by Oct. 15.

First prize in the contest is \$300 in gold plus the merchandise earned, while second prize is \$200 and merchandise. The other grand prizes are: Third, \$100; fourth, \$75, and fifth, \$50, merchandise going with each cash prize.

The broadside announcing the contest carried a double page spread of prizes which all salesmen are eligible to win. With each item, its value is quoted in ice cubes, 120 being the minimum requirement for winning a prize.

The values of household models in ice cubes are: A-411, 15; A-521, 15; A-551, 17; A-701, 18; P-551, 26; P-701, 28; D-661, 56; E-661, 39; D-901, 43; E-901, 46, and E-152, 65.

Commercial units carry the following values: AM-200, 14; "Q", 14; "R", 20; "W", 26; "WA", 28; "X", 28; "XA", 32; "QG", 20; "RG", 25; "XAG", 35.

The following values have been assigned to water coolers: Model B, 16; Model C, 16, and Model D, 22.

TRIP TO EVANSVILLE GOAL IN SERVEL SALES DRIVE

(Concluded from Page 1, Column 1)

meet the company personnel, hear lectures given by plant engineers, on the construction of Servel Hermetic refrigerators, and will be guests at a series of dinners, luncheons, entertainments, and pleasure trips.

To instill greater enthusiasm in contestants, large red and black broadsides containing contest information, pep talks, plant pictures, and the image of V. E. "Sam" Vining, sales manager, have been sent to every dealer in the country.

KEILHOLTZ NAMED RESEARCH DEPARTMENT HEAD

CHICAGO—L. S. Keilholtz, former chief engineer of Frigidaire Corp., Dayton, Ohio, has been appointed general research manager for Montgomery Ward & Co., large mail order house and operator of retail stores.

Mr. Keilholtz will take over the task of coordinating the various research activities which have been carried on by the Montgomery Ward & Co. laboratories in separate fields.

The laboratories which Mr. Keilholtz will direct are research laboratories for chemical and physical testing, and an engineering and research department for the investigation of manufacturing methods, the object of this study being to assist manufacturers in developing special values.

FILLING STATION INSTALLS G. E. WATER COOLER

KANSAS CITY—In a shaded corner of the Kohler Bion filling station, a General Electric water cooler has been installed for the use of patrons and pedestrians. H. G. Frazier, manager of the water cooler department of Glueck and Co., distributor, sold the cooler.

WESTINGHOUSE DRIVE INTRODUCES MODELS

(Concluded from Page 1, Column 5)
before midnight of Sept. 30, when the contest closes.

According to the rules, the sale of any Westinghouse unit entitles the salesman to a specified number of points or "discs," so-called because of the "built-in watchman" disc used in all of the company's refrigerators. These points may be cashed in at the time of their receipt or at the close of the campaign on any of 60 prizes of varying value.

Eleven steps are involved in "building a complete refrigerator." Thirty-five points are required to build the legs of the refrigerator. The shelving may be added with 70 points. One hundred fifteen points add the food compartment, while 155 points install the automatic electric froster.

Freezing trays may be considered as built when the salesman has 195 points, and the hardware comes with 235 points. Two hundred eighty points bring the unit into being, and 320 points add the Spencer disc.

The temperature selector comes when the salesman reaches the 360 mark. The top is placed on when a score of 400 is reached, and another 100 points set the fruit bowl atop the refrigerator.

Appropriations for magazine advertising have been increased for the contest period by the Westinghouse Electric & Mfg. Co., to enable large advertisements to reach an estimated one-half of the wired homes in the United States.

Sales headquarters have also prepared newspaper layouts, outdoor posters, window displays, direct mail literature, handout folders, and store signs and displays for use of dealers during the 60-day sales spurt.

To encourage dealers to purchase these sales aids, the company is offering free of charge, literature display racks with sizeable orders for the material.

In addition to the regular prizes, a model WL-65 Westinghouse electric refrigerator will be awarded to the salesman who makes the best record for the entire contest, and a Westinghouse Columette radio will be presented to the leader of the entire sales force on September 1.

A sandwich grill is to be given to the high-point man of each of the nine sales districts at the end of the campaign.

The basis of point awards for single unit sales has been set as follows: WL-45, 36 points; WL-65, 48 points; DWL-55, 54 points; DWP-55, 59 points; WL-85, 68 points; DWL-75, 70 points; DWP-75, 75 points; DWL-100, 89 points; DWP-100, 94 points; DWL-130, 110 points; DWP-130, 115 points; DWL-180, 130 points; and DWP-180, 140 points.

On apartment house installations, credits given for each respective model sold are: WL-45, 12 points; WL-65, 16 points; DWL-55, 18 points; DWP-55, 20 points; WL-85, 23 points; DWL-75, 24 points; DWP-75, 25 points; DWL-100, 35 points; DWP-100, 32 points; DWL-130, 37 points; DWP-130, 39 points; DWL-180, 44 points; and DWP-180, 47 points.

GIBSON DISTRIBUTING FIRM FORMED IN CINCINNATI

CINCINNATI—Allen T. Schott, president of Schott Mfg. Co., and Erwin J. Schneider, former district supervisor of Frigidaire Corp. and Schneider Grocery and Baking Co., are at the head of the newly organized Gibson Refrigerator Sales Co. This company will distribute the new Gibson electric refrigerators.

Are you trying to STRADDLE TWO JOBS?



THESE C. I. T.
LOCAL OFFICES WILL
WELCOME YOUR INQUIRY

Abilene - Akron - Albany - Allentown
Altoona - Amarillo - Asbury Park - Asheville
Atlanta - Augusta - Baltimore - Bay Shore
Beckley - Binghamton - Birmingham
Bloomington - Bluefield - Boise - Boston
Bronx - Brooklyn - Buffalo - Butte
Camden - Charleston - Charlotte - Chicago
Cincinnati - Clarksburg - Cleveland
Columbia - Columbus - Dallas - Davenport
Dayton - Denver - Des Moines - Detroit
El Paso - Erie - Fort Wayne - Fort Worth
Fresno - Glens Falls - Grand Rapids
Green Bay - Greensboro - Greenville
Hagerstown - Harrisburg - Hartford
Hempstead - Hickory - Houston - Huntington
Indianapolis - Jackson - Jacksonville
Jamaica - Jamestown - Jersey City - Johnson
City - Kansas City - Kenosha - Knoxville
Lansing - Lexington - Lincoln - Little Rock - Los
Angeles - Louisville - Manchester - Memphis
Miami - Milwaukee - Minneapolis - Minot
Montgomery - Montpelier - Mt. Vernon
Nashville - Newark - New Haven - New
Orleans - New York - Norfolk - Oklahoma
City - Omaha - Orlando - Owensboro
Philadelphia - Phoenix - Pittsburgh - Portland,
Me. - Portland, Ore. - Poughkeepsie
Providence - Raleigh - Reading - Reno
Richmond - Roanoke - Rochester
Sacramento - St. George - St. Louis - Salt
Lake City - San Antonio - San Diego - San
Francisco - San Jose - Seattle - Sioux Falls
South Bend - Spokane - Springfield - Spring
Valley - Stockton - Syracuse - Tampa - Toledo
Tucson - Tulsa - Utica - Washington - Wheeling
White Plains - Wichita - Wilkes-Barre
Youngstown.

Selling refrigeration is a full time job...and so is the business of financing time sales. No merchant can do justice to both.

There is extra risk when you try to carry your own paper. Working capital becomes frozen. Overhead has a way of climbing. You cannot afford, in the face of stiff competition, to divert time and energy into a side-line banking business.

Throw your whole organization into selling—and be sure to select Finance Specialists organized to carry the full burden of speedy, close-range investigating, discounting and collecting.

Every financing service you need is offered by the C. I. T. Office in your territory. A source of self-liquidating long term credit plus the utmost cooperation of a skilled Credit and Collection staff... Credit men who guard you against concealed loss risks; collection men who tactfully get results while careful to protect your customer good will.

Put both shoulders behind that drive for sales and use C. I. T. Service to absorb your deferred payment market safely and profitably. Our Refrigerator Plans cover all models of all approved makes.

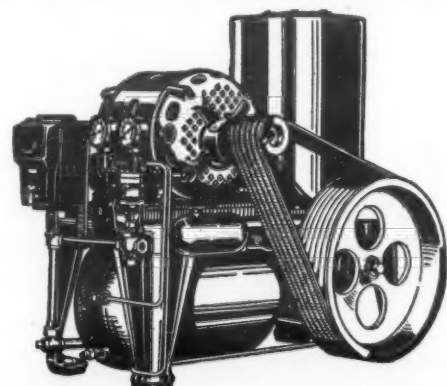
C.I.T. CORPORATION

ONE PARK AVENUE, NEW YORK

A Unit of

COMMERCIAL INVESTMENT TRUST CORPORATION
CAPITAL AND SURPLUS OVER \$90,000,000

Subsidiary and Affiliated Operating Companies with Head Offices in New York
Chicago - San Francisco - Toronto - London - Berlin - Brussels - Paris
Copenhagen - Havana - San Juan, P. R. - Mexico City - Buenos Aires
Sao Paulo - Sydney, Australia - Offices in more than 160 cities.



**Excelsiors
Fill the
Gap**

The New Carbondale Excelsior Refrigerating Machines fill the gap between the domestic type machines and the larger commercial units, meeting the constantly increasing demand for fractional ton capacities, handling the heavy-duty small jobs for which ammonia is especially adapted. Modern in every detail, these thoroughly practical commercial machines meet every requirement of the merchant-users.

Butchers, Restaurants, Grocers, Delicatessens, Dairies, Florists, etc., need refrigeration all the year-around and form a ready and waiting prospect list for Excelsior units. The Carbondale line unfolds new opportunities for business expansion and profits.

May we tell you the whole story?

THE CARBONDALE MACHINE CO.

Main Offices, CARBONDALE, PA.

Address Replies to Excelsior Division,
Box "Y," South Norwalk, Conn.



VANISHING VALLEYS!

Millions of dollars being spent by electric refrigeration manufacturers—more millions being spent by the Electric Refrigeration Bureau—thousands of dealers, and tens of thousands of salesmen talking, thinking refrigeration—here are the reasons why electric refrigeration is regarded as the most promising business to-day.

No other commodity compares with it for popularity. Everybody, everywhere, is talking electric refrigeration—and only two million homes OUT OF MORE THAN TWENTY MILLION have so far actually experienced the economies, the advantages, and the pleasures of electric refrigeration. Great years ahead—and the valleys are not going to be so deep—and the peaks are going to mount to new heights—GREAT YEARS AHEAD!

KELVINATOR CORPORATION, 14245 PLYMOUTH ROAD
DETROIT, MICHIGAN
Kelvinator of Canada, Ltd., London, Ont. Kelvinator Limited, London, England

Kelvinator

ELECTRIC CLOTHES DRYER SOLD BY ROCHFORD-SEARS


CHICAGO—Rochford-Sears, Inc., of Chicago, is offering a new household appliance bearing the name of Electric-Aire, sanitary clothes dryer. It has a three-year guarantee.

The manufacturers claim that the standard household model will dry an average washing in 30 minutes, and is equivalent to 75 ft. of clothes line. A duplex model, for larger families, carries a double set of drying spokes above the bowl-shaped heat radiator which supports the umbrella-like drying structure.

By folding up the clothes supports, the appliance occupies no more room than a vacuum cleaner, and can be placed in a closet or corner conveniently.

HOUSEHOLD PRODUCTS FIRMS PAY \$3,267,819 IN JUNE DIVIDENDS

NEW YORK—Dividends paid by manufacturers of household products in June amounted to \$3,267,819, according to the Standard Statistics Co., of New York. Total cash dividend payments in June were \$412,327,778.

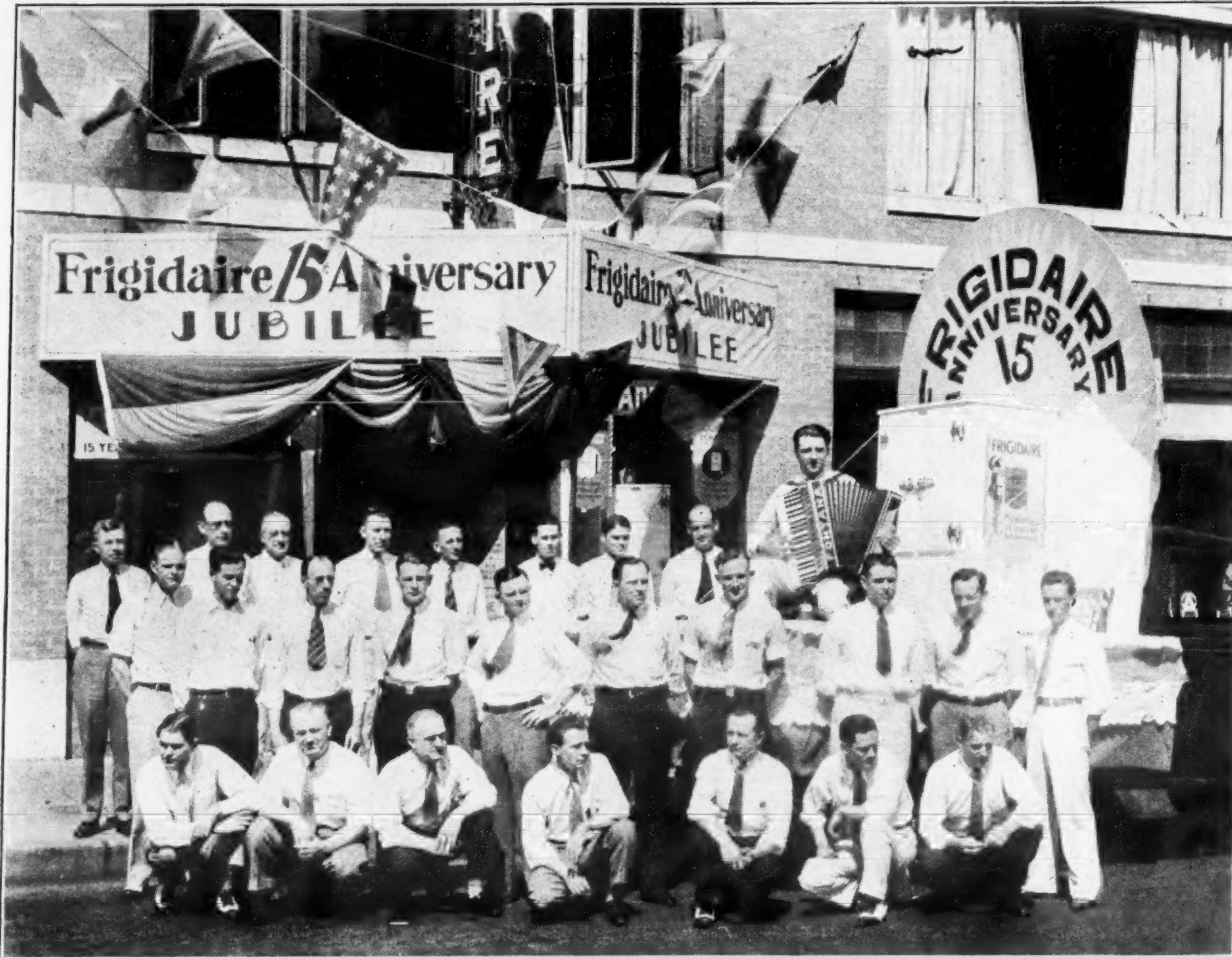


A clear view easy reading thermometer—designed to give the utmost in instrument accuracy and dependability.

Easily interchangeable refill. Nickel plated brass case, not affected by brine.

Carroll Glass Instrument Co.

Opening Frigidaire's Jubilee



Residents of Tulsa, Okla., were introduced to Frigidaire's Fifteenth Anniversary jubilee by W. J. Dance, Inc., Oklahoma City territory distributor. The dealer hired an accordion player for three days and he played from a truck as it traversed the streets.

WESTINGHOUSE MAKES FOUR APPOINTMENTS

EAST PITTSBURGH, Pa.—J. S. Tritle, vice president and general manager of the Westinghouse Electric and Mfg. Co., announces the appointment of T. J. Pace, assistant to vice president, in charge of general market planning, and research analysis; M. B. Lambert, sales manager in charge of transportation department; O. F. Stroman, sales manager in charge of industrial department; and R. A. Neal, sales manager in charge of central station department.

Mr. Pace, assistant to the vice president, has been, since 1926, director of sales. He joined Westinghouse in 1902 when the Manhattan General Construction Co., of which he was assistant general manager, was absorbed by Westinghouse. In 1905 he was made manager of the illuminating section and in 1922 became manager of the supply sales department.

Mr. Neal, sales manager in charge of the central station department, has been with Westinghouse Co. since 1910, the year in which he graduated from the University of New Hampshire. In 1912 he became a member of the switchboard sales department. He was made manager of the switch section in 1920 and remained in that position until 1926, when he was appointed switchgear apparatus manager.

Mr. Stroman has been associated with Westinghouse since 1903. After graduating from the Perkins School of Electricity, he entered the Westinghouse apprentice course and in 1905 was given charge of one of the company's experimental departments. From 1906 until 1909 he was a member of the power sales department when he joined the industrial sales department. In 1912 he was made assistant to the manager and held that position until 1926, when he was appointed motor apparatus manager.

Mr. Stroman is an executive member for Westinghouse in the National Electric Manufacturers Association.

Mr. Lambert, sales manager in charge of transportation department, has spent his entire working life in the transportation world. Previous to joining Westinghouse Co. in 1900, he spent some years in the operating service of New York district railways.

FAGAN RE-NAMED PRESIDENT OF PACIFIC FIRM

LOS ANGELES, Calif.—At the annual stockholders meeting of the Pacific Wholesale, Ltd., distributor of Holbrook electric refrigerators and other electrical appliances, Walter M. Fagan was re-elected president and treasurer, and Frank S. Fagan was named executive vice president. Joseph M. Spain, formerly of the California Victor Distributing Co., was elected vice president in charge of sales, and J. B. McElroy was made secretary.

NEW DISTRIBUTOR FOR TEMPRITE

HARRISBURG, Pa.—The Kelvinator Kelly Co. has recently taken over Temprite distribution in the Harrisburg territory.

UTILITY SELLS 103% OF QUOTA FOR N. K. OVALLE

HARRISBURG, Pa.—Pennsylvania Power and Light Co. is leading electric refrigerator sales in the utility field of N. K. Ovalle, Inc., General Electric distributor. The utility has sold 103 per cent of its quota.

Ovalle dealers are leading group sales for the first six months, with 408 units sold or 77.3 per cent of the quota. Second place is held by the utilities, which sold 943 units or 71.2 per cent of the quota to date.

Nine hundred and seventy-five units have been sold by retail stores. This is 54.2 per cent of the quota.

MUSIC FIRM DISTRIBUTES MAYFLOWER LINE

DENVER, Colo.—(UTPS)—Representation for the Mayflower line of electric refrigerators in this city has been taken over by the Knight-Campbell Music Co. The new line is handled in connection with radios.

During the past two months this concern has made 70 domestic installations in Denver.

Something New To Sell
Something New To Talk About
Something New To Land The Order

Easy-Out

ALL METAL TWIN ICE TRAY

MAKES ICE BARS *Not Cubes*
OUT IN A JIFFY without holding under water
20% TO 50% FASTER FREEZING . . .

FOR ALL POPULAR
REFRIGERATORS



The Easy-Out is not "just another gadget." It is a useful, time-saving convenient new accessory—a new idea—a new appeal. Ice Bars are modern. They are better looking than cubes. They strike the public's fancy. With all makes of refrigerators featuring practically the same advantage, the dealer certainly needs something to sell that's different.

The Easy-Out adds new freshness to your sales story. It gives you something new to talk about, something new to sell. You can price your units with the Easy-Out as equipment—no one will

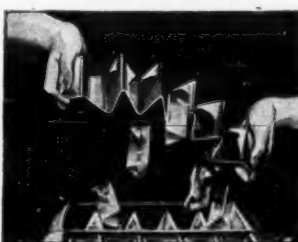
question the extra price when they see the added convenience. From \$1.60 to \$20.00 extra profit for you. In addition, it gives you a novelty item that your service men can sell to your old owners—and help pay the expense of service calls.

It's new! It's news! It's the coming sensation! Send in \$1 for a trial tray. Ask about the Special Introductory Offer we are making for a limited time only. Write today for discounts. In ordering a \$1 trial tray give the size of tray now used and make of refrigerator.



COUNTER DISPLAY FREE!

With every order for ten or more Easy-Out trays, this attractive counter display, in full color, will be sent free of charge. This display sells the Easy-Out through words and pictures and provides a sample tray that your customers may try.



OUT COMES ICE IN A JIFFY

Pressing on the end flaps loosens the grid from the tray. After the grid is lifted out, flexing the grid frees the ice bars. You need not turn out entire contents of tray every time you need ice.

REFRIGERATION
ACCESSORIES
DEPARTMENT OF

M^cCORD

RADIATOR
& MFG. CO.
DETROIT, MICH.

Engineer Wanted

for

Excellent Opening

Attractive Future for Capable Man

A large manufacturer of Refrigerator parts wants an engineer capable of design and development of various component assemblies used in household and small commercial refrigeration equipment.

We require a man with a thorough knowledge gained by experience in the past development of the industry and one who can meet and, if possible, anticipate the trend of future design. Ability to contact well with customers' engineers is desirable.

To such a man we offer a good position, with excellent possibilities for the future and the cooperation of a large, well-trained organization. Location: New England. Write full particulars in first letter.

Box 349—Electric Refrigeration News



What of Your Refrigerator— when every home is a box seat at the ball game?

When national barriers have dissolved through the marvels of instant communication . . . when friends hold electric communion without leaving their firesides . . . when at the turn of a button events of the world occur in your library, what about your refrigerator built to the efficiency standard of 1931?

Will it match the superb standards of a new generation? Will its gleaming epidermis encase insulation that still keeps out the heat of kitchens where it's summer all year round? Will the foodstuffs on its shelves have that EXTRA freshness that marked the efficiency of its first year's service?

There are many manufacturers who are insuring dependable and continuous high grade service from their refrigerators by insulating them TODAY with Dry-Zero Pliable Slab—the lifetime insulation. Their's is no worry about insulation failure in the years to come for Dry-Zero cannot settle, crack or disintegrate in use. It can never develop or absorb odors. It has an amazing aversion to moisture.

Dependable and unbiased authorities who have tested Dry-Zero show that it is the most efficient commercial insulant known. Its use in refrigerators, in refrigerated motor trucks, in railway refrigerator cars over a period of years verified these test findings.

No matter what marvellous developments take place during the life of the refrigerator, the manufacturer who uses Dry-Zero insulation today knows its efficiency will be the same through ensuing years of service.

DRY-ZERO CORPORATION
Merchandise Mart - Chicago, Illinois
Canadian Office - 465 Parliament Street, Toronto

DRY-ZERO
THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN

MERCHANDISING SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published Every Two Weeks by

BUSINESS NEWS PUBLISHING CO.

550 Maccabees Building, Woodward Ave. and Putnam St.
Detroit, Michigan. Telephones: Columbia 4242-4243-4244

Subscription Rates:

United States and Possessions: \$2.00 per year;
three years for \$5.00

All Other Countries: \$2.25 per year; two years for \$4.00

IMPORTANT NOTICE: Beginning Sept. 9, 1931, Electric Refrigeration News will be issued every week. The Refrigerated Food Section will be discontinued with this issue and will appear as a separate publication, Refrigerated Food News, on Sept. 1. Subscription rates as given above are subject to increase after September 30, 1931.

F. M. COCKRELL, Publisher

GEORGE F. TAUBENECK, Editor

JOHN DRITTLER, Managing Editor

JOHN T. SCHAEFER, Engineering Editor

JOHN R. ADAMS, Assistant Editor

FREDERICK W. BRACK, Advertising Manager

GEORGE N. CONGDON, Business Manager

Member, Audit Bureau of Circulations

Copyright 1931 by Business News Publishing Co.

VOL. 5, No. 24, SERIAL No. 126, Part 1, July 29, 1931

Editorial Aims of the News

To encourage the development of the art.

To promote ethical practices in the business.

To foster friendly relations throughout the industry.

To provide a clearing house for new methods and ideas.

To broadcast the technical, commercial and personal news of the field.

Doubled Service

EVERY Wednesday! ELECTRIC REFRIGERATION NEWS, which has been serving refrigeration men and organizations with a timely recording of the march of events in the industry every two weeks for almost five years, is now to be issued weekly. Twice as often will subscribers to the NEWS be given complete and unbiased reports of what is going on in the world of refrigeration.

More advantageous postal facilities, a smoothed-out production load, an expanded staff, increased speed in mailing—many things will combine to help the weekly NEWS arrive in the hands of readers more swiftly. "Written to be read on arrival," ELECTRIC REFRIGERATION NEWS has prided itself on printing the news first. Now, with an issue coming out each Wednesday, its value as the leading source of information on the industry should be greatly enhanced.

Psychological Moment

The decision to publish the NEWS weekly coincides with a decision of electric refrigeration executives throughout the industry to speed up sales activities this fall. To a remarkable degree, and for the first time, the leading sales organizations are geared up to do a real selling job during the second half of the year.

Right now the distributors, dealers, and salesmen of Frigidaire, Kelvinator, Servel, Westinghouse, Norge, Copeland, and Apex are engaged in hot competitive struggles for various awards offered in sales contests. Plans for other contests will be announced soon. The Electric Refrigeration Bureau activities of the National Electric Light Association will be renewed in September.

With all the movement and hustle and drive so prevalent in the industry today, the appearance of a weekly ELECTRIC REFRIGERATION NEWS comes at a moment both timely and psychological.

The eyes of the nation's business and financial leaders have been focussed upon electric refrigeration because of the outstanding sales record it has made during a depression period, because of the manner in which it has weathered the storms in which other industries have faltered and foundered.

Great Potentiality

Men of vision in the refrigeration world maintain that a stupendously large field for modern refrigeration is just now opening up to the trail blazers of the industry. The pioneering spirit is still strong, a wealth of energy and enthusiasm is available and straining at the leash, and the field for new applications seems practically unlimited.

Important events are taking place faster than ever before. In order to keep pace with the rapid

developments of the day, and to get set for those which seem sure to come, ELECTRIC REFRIGERATION NEWS is now ready to double its service, give impetus to the increased activities of sales organizations, and report the news twice as frequently as before.

ELECTRIC REFRIGERATION NEWS had its inception when the industry was struggling in a depression of its own, when it was starting afresh and building from the ground up again. Since that time the NEWS has grown with the industry. Progress in electric refrigeration has been matched by progress in the service of the NEWS.

When refrigerated foods began to achieve prominence as a business opportunity and take shape as a specific industry, the *Refrigerated Food Section* appeared to report news of this potential field—a field which has now reached the point where, we believe, a separate paper is justified. REFRIGERATED FOOD NEWS will appear September 1.

When the industry was seeking companion merchandise to level up its sales curves, ways and means of improving efficiency and cutting costs, the NEWS brought out a Buyers' Guide section on pink paper to attract attention to definite answers to these problems.

When the number of refrigerating machines in use had attained impressive proportions, requests for technical and service information began to mount steadily. The NEWS answered that demand last spring with its well-received *Engineering Section*, printed on green paper.

Accelerated Pace

Today the demand is for more news, for more speed, for a medium of interpretation which will match an industry running in high gear. Again the NEWS accelerates its pace by publishing an issue every week.

Whatever turn the industry may take, whatever may happen in this swift-moving sphere of activity, the NEWS intends to be there and deliver the goods. Should the growth of the industry warrant it, the NEWS will appear twice a week, or daily! Whatever be the demand for service, ELECTRIC REFRIGERATION NEWS will continue to fulfill the expectations of its subscribers.

GLEANINGS FROM RECENT PERIODICALS

"Any business, sound in its basis, profitable in normal times, enjoying any advantage over competitors, soundly financed, with integrity on the part of the board of directors," the article says, "can be brought back to its normal earning in spite of the general depression—the progress to begin immediately and the normal apparent within a year's time."

One of the points in *Nation's Business* program refers to the hidden enemies in almost every business. "The biggest job for the moment," the article says, "is to identify them, attack them and drive them out."

"Some of these enemies are belated adherences to tradition, slavish acceptance of trade custom, parrot-like application of the methods of competition, subjecting sales to the manufacturing or even engineering point of view, trying to cover all of the map instead of intensely cultivating the most productive part, unwieldy board-of-directors management, failure to seek and find new markets, dull self-satisfaction with the all-rightness of the product, too many pep talks and not enough footwork, imitative or conventional advertising, lack of courage in treating advertising as a capital investment, and so on to the end of a long chapter."

The article derives double interest from the fact that it is a presentation by a noted merchandising expert, Norval A. Hawkins, of a thesis developed by an equally noted advertising authority, Theodore F. MacManus, of Detroit.—*The Advertiser*, Detroit.

Are electric refrigerators to become as numerous as automobiles, washing machines, vacuum cleaners and radio sets, and to take their place on the list of items which made up "the American standard of living?" That is not impossible. The industry is in full stride, and going fast. The National Electric Light Association has made definite plans to sell 1,000,000 refrigerators of various brands this year, or one for every four new cars which will be placed on the road. More than that, the quota for the first six months has been reached, and the final goal is now sought by means of newspaper and magazine advertising, radio talks, booklets, billboards, window displays, etc. The business depression has not had any depressing effect on the promoters. The merits of their merchandise, as of cars, cleaners, radio apparatus, warming plates, etc., are obvious.

There are few great sources of hydro-electric power which the utility companies have not tapped, and few expense-saving devices in steam plants which have not been installed. There are literally millions of homes, however, where there is need of electric fans, air-cooling apparatus and receptacles which will protect all kinds of foods against the decay caused by heat. President Sloan of the New York Edison Company has been spurring his associates to develop this whole boundless field. Every city house is a potential customer, and every farm building which is within reach of wires.—*Boston Herald*.

Portland Refrigeration Association Adopts Code of Ethics

PORTLAND—A code of ethics for dealers of electric refrigerators and ice products has been adopted by the Portland Refrigeration Association, Portland, Me., whose membership comprises all dealers of electric refrigerators—one department store excepted—and all ice manufacturers in the city.

The new code of ethics follows:

1. Members of the Association agree not to approach a customer after he has signed a contract with a competitor.
2. No member of this Bureau shall install a competitive electric refrigerator in a house where one, which has been sold, is already installed, and not yet paid for, without consulting the dealer who installed same, unless that dealer is no longer handling that make.
3. Members of the Association agree not to make derogatory statements before a customer about the ability or financial strength of a competitor.
4. No member shall employ a salesman having previous refrigeration experience without first consulting his former employer.
5. Members of the Association agree that electric refrigerators shall not be placed on free trial.
6. Members agree that quantity discounts are to be set forth in the schedule already adopted, a copy of which is attached to this code.
7. All members will make available to one another, price schedules on domestic models and automatically keep one another informed of any changes. One copy of such price schedule is to be affixed to this code.
8. The officers of the Association shall be president, vice president, secretary and treasurer. Nominations are to be from the floor, but elections will be carried out by written ballot. The terms of these officers are to run for six months with elections to be held one week previous to the expiration of the officers' terms.
9. Members agree to notify the secretary of the Association of any refrigerators sold at a reduction, as a prize in connection with any exhibition, fair, etc.
10. The Association shall go on record as being opposed to all co-operative advertising of the nature wherein a refrigerator dealer runs advertising to the effect that he installed refrigerators on such and such premises, except that such advertising be sanctioned by the Bureau.
11. Baseboard installations are to be made in accordance with the schedule already adopted; that is, a standard price of \$5.00 where installations can be made from circuit already on same floor. Otherwise, where installation must be made originally in the basement, the charge is to be \$5.00 for the first floor. The charge will increase \$5.00 for each additional floor; for example, second floor \$10.00, third floor \$15.00, etc.
12. It is agreed that members shall continue to rent water coolers if they wish, but members agree not to rent refrigerators.
13. As already agreed, members may sell refrigerators on 90 days cash terms.
14. As already agreed, the minimum down-payment on any refrigerator is to be 10 per cent.
15. Servicing of competitive makes in a sudden emergency is permissible.
16. Special terms and prices to employees shall be left to the discretion of individual members.
17. As already agreed, members will not make allowances on old type ice boxes.
18. Only firms will be accepted as members of the Bureau and each one will be entitled to only one vote.
19. There shall be no discounts of any nature except as in the discount schedule already adopted.
20. A quorum for conducting a meeting shall consist of not less than three-fourths of the entire voting membership.
21. It is believed that rather than have formal dues the Bureau may vote special assessments for special purposes at any meeting.
22. Regular monthly meetings are to be held on the second Monday of each month, at places to be decided on at each meeting.
23. A special meeting may be called by the president. In such an event the president will notify the secretary, who in turn will notify the members.
24. It shall be the duty of the arbitration committee to consider every infraction of the code by any member, or members, and to justly try the offenders and to justly arrive at a decision and to inflict penalties, if any, under the code. The arbitration committee shall also arbitrate differences between member firms, and where any firm may prove to have been infuriated by actions of another, through violation of the code, the arbitration committee shall decide the case and take whatever action it may deem necessary. All parties concerned in any case arbitrated by the committee are to accept the committee's findings as final and abide by them. Any member, or members, of the arbitration committee involved in a case for con-

sideration may appoint an alternate in his place on the committee.

25. A member violating any provision of the code first shall be warned, then, if he persists, will be fined \$25.00, and finally, if he is still contrary, will be suspended from the organization for six months, when he can again become a member, if approved by a majority ballot of active members, by paying his dues, if any.

26. Any member may resign from the Bureau by giving written notice to the president one month in advance of the time at which he wishes his resignation to take effect, and after the Bureau has acted upon this resignation.

27. Members who wish to be reinstated after leaving the Bureau may be reinstated after notifying the president of their wishes in this regard one month in advance of the time at which they wish the reinstatement to become effective, and after the Bureau has acted on such a request.

28. Any salesman of a member firm who shall in any way share his commission with a customer in order to get an order and circumvent this code, shall be called before the Bureau at a meeting, by his firm; and he shall be warned not to do so again. A second occurrence of this nature by a salesman shall result in the member employing this salesman dismissing him from selling refrigeration and no other member shall employ that salesman in selling refrigeration.

Letters From Readers

They Pay Their Light Bills In Mansfield

Mansfield, Ohio.

Editor:

Somebody favored me with a copy of the July First issue of your paper, which I read with a great deal of interest.

I even read your own article concerning our fair city, and while, of course, you gave us a very nice send-off, I feel, as no doubt 35,000 other loyal Mansfielders would also feel, that you have grossly insulted our ability to pay electric light bills when you tell the world that our lights are turned off promptly at midnight.

Your statement is only partially true. They do turn off the show window lights at that time, which makes quite a difference in the illumination along any thoroughfare. And they do turn off the "white-way" lighting system at the same moment, but they also leave sufficient lights burning to enable even the worst inebriate to walk with certainty.

In case you didn't observe those remaining lights, I am wondering if, perchance, you found something in those box-cars that was not on their bill-of-fare, and that subsequently put out all lights for you.

In another paragraph you state that there are street car lines, but no cars running, but I'm not sure if you mean in daytime or only after midnight, when they do stop. We actually have street cars in operation regularly.

I am glad, though, that you liked our city, and that it made sufficient impression on you to warrant all the space expended.

H. N. UMBARGER,
Radio and Refrigeration Dealer.

Kind Words Department

We would like to compliment you on the manner in which you have been building up this paper. It certainly does a very good job in this field now.—Eustace C. Soares, treasurer, The R. B. Engineering Corp., New York City.

We wish to take this opportunity of stating that in our opinion your paper is one which no refrigeration executive or salesman should be without.—H. A. C. Smith, sales manager, American Auto Stores Co., Lancaster, Pa.

I enjoy reading ELECTRIC REFRIGERATION NEWS.—W. A. Frey, Ft. Madison, Iowa.

I consider your coverage excellent.—W. E. Harber, Fort Wayne, Ind.

The NEWS covers 'most every item. I am well pleased.—L. M. Hofgesang, Louisville, Ky.

The Engineering Section is fine.—Thomas W. Binder, Trenton, N. J.

I think the NEWS covers pretty nearly everything of interest.—William Shellhorn, Brooklyn, N. Y.

Your paper is complete in every issue.—Stanley Hupfeld, Baltimore, Md.

Wouldn't be without your paper.—L. W. Smith, Mt. Airy, Pa.

I am very well satisfied with your paper.—Alten Kull, Villa Grove, Ill.

I think your paper carries the best news on refrigeration.—John M. Jung, Sioux City, Iowa.

ELECTRIC REFRIGERATION NEWS is entirely satisfactory as it is.—George W. Wacker, Cincinnati, Ohio.

The NEWS is a wonderful paper just as it is.—James R. Redmond, Altadena, Calif.



*A tiny gas flame
takes the place of
all moving parts.*

①

THIS is Philadelphia's largest apartment

On Clearview Avenue, just west of Broad Street, stands Norfolk and Suffolk Manor, Philadelphia's largest apartment house, housing 276 families.

Mr. John Loughrans is president of John Loughrans & Sons, Inc., who own and operate Norfolk and Suffolk Manor.

③

...AND this is why!

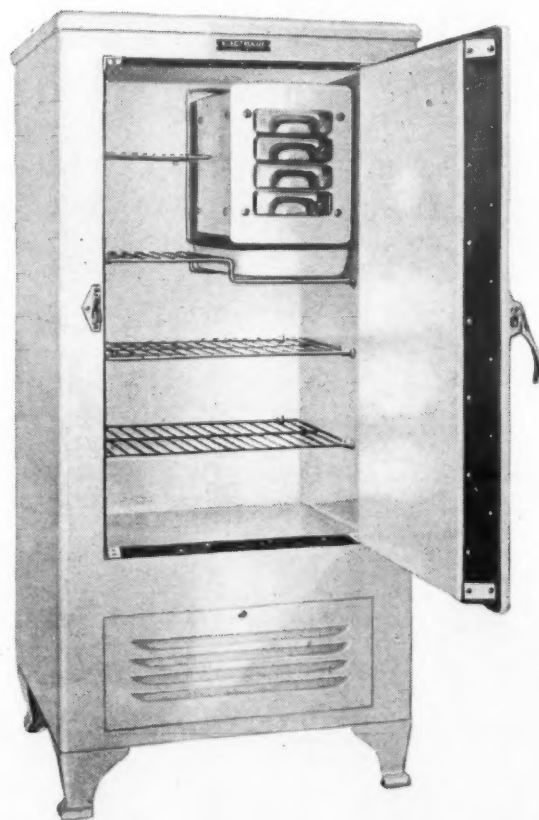
"We were pretty hard-boiled about refrigerators," says Mr. Loughrans. "We didn't take anybody's word for anything, but went ahead checking up various refrigerators for operation economy, appearance, silence, and reliability. Finally we decided upon Electrolux, the gas refrigerator, and successful results have proved the wisdom of our choice."

This is just one instance where Electrolux has won out in a competitive test. Again and again apartment owners who cannot be swayed by honeyed words select Electrolux on the basis of sheer fact. Electrolux Refrigerator Sales, Inc., Evansville, Ind.

②

THIS is the refrigerator they specified

276 of these Electrolux Models were installed in the apartments after John Loughrans & Sons, Inc., had carefully investigated various makes.



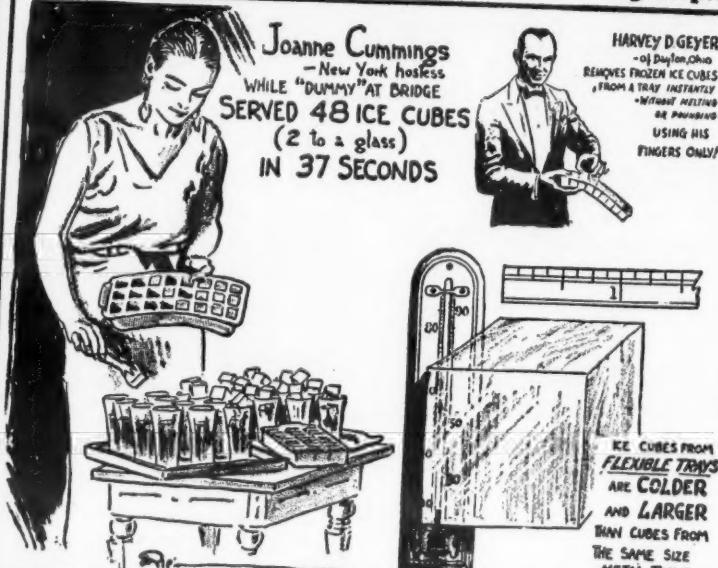
ELECTROLUX THE *Gas* REFRIGERATOR

BELIEVE IT OR NOT...By RIPLEY
MAKES MILLIONS READ

Flexo Tray

NATIONAL ADVERTISING

BELIEVE IT OR NOT -----By Ripley



... AT LAST—A MODERN ICE TRAY

Preparing iced drinks is no longer a troublesome, messy task. Because these new freezing trays are made of flexible rubber, it takes only a few seconds to remove one of them from a refrigerator and serve all the cubes—direct from tray to glass instantly. No melting of cubes into the sink—no splashing of water to ruin clothes. Flexible rubber freezing trays are now standard equipment in all leading makes of automatic refrigerators. Insist upon having this modern con-

venience in the refrigerator you buy. **Flexible Trays for Your Refrigerator**

A flexible rubber tray is made to fit every automatic refrigerator—DuFlex for General Electric—Quickcube for Frigidaire—and Flexotray for Westinghouse, Kelvinator, Copeland, Leonard, Electrolux, Servel, Universal, Norge, Majestic, Trupar, Apex, Starr, and others.

See the local dealer of your make of refrigerator or write us direct, giving make of refrigerator and number of ice cube spaces in your present trays.

THE INLAND MANUFACTURING CO.
Department H, Dayton, Ohio

Flexo Tray
Patented and Patents Pending Reg. U. S. Pat. Off.
ICE CUBES INSTANTLY—TRAY TO GLASS

Look at it... another captivating Flexotray advertisement of the interesting series now appearing in *The New Yorker*, *National Geographic*, *Collier's*, and other national magazines. Robert L. Ripley, himself, makes the drawings that will make money for you. "Believe It or Not"... but get the facts first.

Flexotray national advertising is creating a sensation. So are flexible rubber ice trays. And one big reason is the famous "Believe It or Not" series of cartoons by Robert L. Ripley.

Ripley and riddles go together. That's why millions of people read Ripley every day to learn what new riddles he has solved.

In flexible ice trays, Ripley has a "natural"... something that cannot miss. So altogether, here is a combination that pulls inquiries and pushes sales.

"Believe It or Not"... flexible rubber ice trays are a fixture, not a fad, in modern automatic refrigerators. Owners want this modern

tray because it serves ice cubes, one at a time from tray to glass or all at once... without any melting, pounding or waste. It's clean. It's convenient. It's new. And it's a money maker for you... right now!

Stock a supply of flexible ice trays. They're made for the refrigerator you sell... for all of the others, too. Sell flexible trays with new refrigerators and to old customers. Boost your list of prospects, your percentage of profits.

Write to the refrigerator manufacturer you represent... or to us direct... for full details. And... "Believe It or Not"... you've lots to gain and nothing to lose.

THE INLAND MANUFACTURING COMPANY
DAYTON, OHIO

Flexo Tray
ICE CUBES INSTANTLY—TRAY TO GLASS

TEXAS TESTS PUBLIC UTILITY CO. CHARTER

SAN ANTONIO, Tex.—Keen interest has been aroused among electrical appliance dealers in Texas over the suit, filed in the Fifty-Third District Court of Travis County by Attorney General James V. Allred against the San Antonio Public Service Co., seeking forfeiture of the charter of the firm on the grounds that it has violated the purposes set forth in its application.

The petition declares that the company has "unlawfully entered into and engaged upon another and a separate and distinct business from that for which it was chartered, and from that which it was authorized by law to enter into, to wit:

The buying and selling at wholesale and retail of goods, wares and merchandise; that the defendant has particularly engaged in the buying and selling, at wholesale and retail, for cash, and upon long time terms of credit, all kinds, classes and character of electrical appliances and contrivances, including electric irons, fans, toasters, waffle irons, cooking stoves, heating stoves, light globes, washing machines, radios, electric refrigerators, water heaters, percolators, and innumerable other articles of merchandise."

2 INSTALLATIONS REPORTED BY ROCKVILLE DEALER

ROCKVILLE, Md. — Installation of Frigidaire equipment in two large institutions is reported by J. R. Enright, distributor.

In the Baptist Home for Children, Alta Vista, Md., one AP-60, one AP-18, and one AP-7-2 have been installed; and six water coolers will be placed in the Montgomery County Court House here.

Insulated Airmen

CHICAGO, Ill. — "Winnie Mae," the Lockheed-Vega monoplane which carried Post and Gatty on their record-breaking flight around the world, was insulated with Balsam-Wool.

This insulant was also used by Byrd and Macmillan in their exploration trips.

CONNECTICUT REFRIGERATION DEALERS START BUREAU

STAMFORD, Conn.—The majority of electric refrigeration dealers of this city and Darien have banded together in an Electric Refrigeration bureau for the promotion of business.

Dealers in the bureau are: Arthura, Inc. (Majestic); Darien Electric Co. (General Electric); Cunliffe Battery & Charging Station (Norge); Downes-Smith Co. (Frigidaire); Fairbanks Electric Co., Inc. (Kelvinator); M. Fitelson, Darien (Majestic); Lockwood & Palmer Co. (Mayflower); Silerman Furniture Co. (Copeland); Stamford Gas & Electric Co. (Westinghouse), and Temple of Music (Majestic).

REFRIGERATOR SALES SHOW PROGRESS IN WEST

SAN FRANCISCO, Calif.—According to Dun's Review, the one outstanding sales progress in San Francisco trade area during the past few weeks is marked up by electrical refrigeration equipment, due, says the report, to active advertising and aggressive sales campaigns.

Sales of other household equipment, particularly of the electrical type, such as vacuum cleaners, has not kept pace with those of refrigerators.

ARCTIC AIR MAKERS EXPAND DISTRIBUTION

DETROIT—Sun Glow Industries, Inc., furniture manufacturers, located at Mansfield, Ohio, have announced the entrance into the commercial field of their electric refrigerator, Arctic Air, which has formerly been distributed only by the 151 retail stores which the corporation operates, according to S. R. Jones, sales director.

An expanded production program is being planned at the Commerce Pattern Foundry & Machine Works, located here, where the Arctic Air units are being manufactured, to meet orders placed by the Crowley-Milner store of this city, the Hartmann stores in Chicago, and other retailers.

The Arctic Air models will feature a removable unit, which can be detached from the motor and lifted out of the machine, to be replaced by an auxiliary unit while it is sent to the factory for inspection or repairs. The motor, set on a hinged board, may be "folded back" when it is necessary to remove the unit.

The refrigerating machine has a reciprocating compressor, with sulphur dioxide as the refrigerant. It is powered with a Wagner motor. Bellows-type seals are used.

At present three models are being placed on the market. Model S-5 has a food storage capacity of approximately 5 cu. ft. and a shelf area of 8.72 sq. ft. It carries two ice trays making 56 cubes.

Model S-6½ has a food storage capacity of 6½ cu. ft. approximately, and a shelf area running to 10.75 sq. ft. It is equipped with three ice trays making 84 cubes.

Model S-8 has an 8 cu. ft. food storage capacity and a shelf area of 13.1 sq. ft. The model has four ice trays making 112 cubes and a "cold-oven" pan for quick-frozen foods.

TEMPRITE offers its distributors a new SALES BUILDER

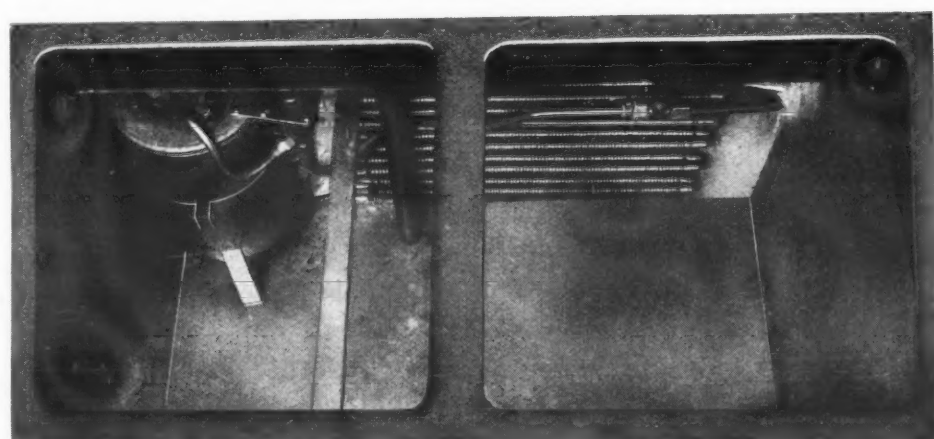
HERE is Temprite's answer to the demand for an efficient cooling unit required in restaurant, cafe and cafeteria water cooling installations. This new Temprite Model 25-W, because of its small size, only 7 inches in diameter and 11½ inches high, permits its use in almost any cabinet, counter or refrigerated case. And the same unit, 25-B, is ideal for beverage cooling. All beverage coils in the 25-B are of copper and are internally tinned.



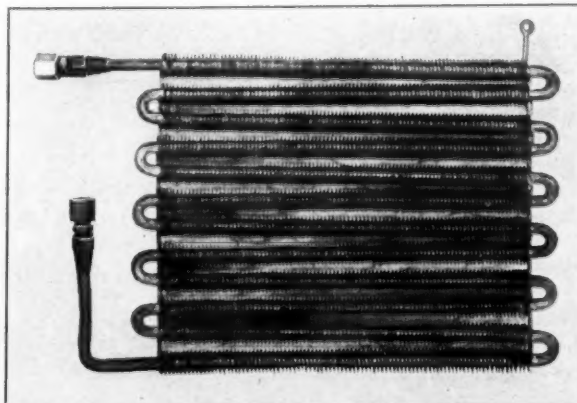
MODEL 25-W or 25-B

MAY BE DUPLEXED

You can duplex No. 25-W to other refrigeration equipment without use of two-temperature valves. Restaurant men will welcome this modern water cooling equipment which can be operated by their present refrigeration machines.



TYPICAL INSTALLATION OF TEMPRITE 25-W IN RESTAURANT FLOOR CASE



2 SIZES IN FINNED COILS ARE STANDARD

No. 1—18 inches high and 20 inches long for 28-inch compartment.
No. 2—18 inches high and 32 inches long for 40-inch compartment.

Both are efficient in handling the average restaurant floor coolers.

Storage Compartment Cooling

A finned evaporator coil is a special feature of this new Temprite cooler. Built in two sizes, suitable for 90% of restaurant installations, the coil is capable of maintaining 40 to 45 degrees temperature in the storage compartment. This double-duty 25-W cooler will provide water at 40 degrees to one or two faucets and still hold a low temperature in the storage compartment. This coil is attached to side connectors to the cooling unit and is maintained flooded.

Proved Success

Temprite methods of cooling water or beverages and in addition a storage compartment have been adopted as standard by leading soda fountain manufacturers. Thoroughly tested, distributors will find this unit, in its many applications, has a ready market. Write now and get full particulars.

LIQUID COOLER CORPORATION

6527 Russell Street " " Detroit, Michigan

Western Coast Distributors: Refrigeration Products, Ltd.
1110 No. Alameda St., Los Angeles, Calif.

River House, New York, Equipped Throughout With

CABINETS BY

Seeger

SAINT PAUL



Bottomley, Wagner & White, Architects. James Stewart & Co., Inc., Builders.

It is fitting that each one of the pretentious co-operative apartments in this beautiful, most modern building, be equipped with two or more DeLuxe All Porcelain 1931 Model Cabinets by Seeger.

This finest of installations was obtained by the Seeger New York Organization, as was the Cabinet Installation for the Empire State Club.

SEEGER REFRIGERATOR COMPANY

232 Fourth Ave.
NEW YORK, N. Y.

Statler Building
BOSTON, MASS.

655-57 So. La Brea Ave.
LOS ANGELES, CAL.

666 North Wabash
CHICAGO, ILL.

SIX INSTALLATIONS MADE BY PORTLAND DEALER

PORTLAND, Me.—Numerous installations of Frigidaire equipment have been made recently by the Portland Sales branch, W. B. Ward, Jr., announces. Twelve WM-3 cabinets and one W-475 compressor have been placed in the Kensington apartments here.

Leon Carle, Norace Inn, N. Raymond, Me., has purchased one T-200 water cooler, one W-5100 compressor, one 300-

lb. ice maker, and one 7 cu. ft. Seeger box. H. H. Hay Sons Drug Co. of Portland, has purchased a 12 cu. ft. Frigidaire for biological supplies. The company now has six units.

Sixteen WM-3 cabinets with W-5100 compressor have been sold to the Bramhall apartments, while F. M. Hebert, manager of Sherwood hotel, has purchased a W-5100 compressor and two 96-F coils.

The local dealer is also installing a pipe coil job in South Portland to be used for the storage of poultry.

KULAIR

is making Refrigeration a better investment

today refrigeration distributors insist upon living profits on their investments. Yesterday took its toll of willing capital with lifeless methods. Such methods are no longer countenanced.

That is why KULAIR Electrical Refrigeration Products are employed by successful refrigeration merchandisers—why 95 per cent. of all local trade name refrigeration is a KULAIR product.

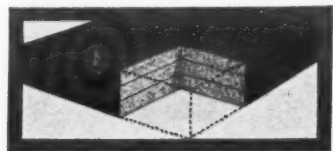
KULAIR the originator of the direct factory to distributor policy allowing the distribution exclusively over private brands.

Write for Information to

KULAIR CORPORATION PHILADELPHIA, PA.

EFFICIENT

Balsam-Wool



Sealed Slabs

INSULATION

EVIDENCE of the real confidence the buying public has in Balsam-Wool—true insulation—is stressed by this fact: After eight years of ever increasing sales, Balsam-Wool Refrigerator Insulation sales for the first six months of the current year are in excess of those of any previous full year!

WOOD CONVERSION COMPANY

Mills at Cloquet, Minnesota



Industrial Sales Offices:

CHICAGO, 360 No. Michigan Ave. NEW YORK, 3107 Chanin Bldg. DETROIT, 515 Stephenson Bldg. SAN FRANCISCO, 149 California St.

Also manufacturers of Balsam-Wool Refrigerator Car and Steel Passenger Car Insulations; Balsam-Wool Insulations for Airplanes and Motor Buses; Balsam-Wool Acoustical Treatments; Balsam-Wool Building Insulation; Nu-Wool, the All-Wool Insulating Board and V-Joint Lath

IDEAS AND IMPRESSIONS • COMMENT • VIEWS AND EXPERIENCES

By F. M. COCKRELL

News Sources

"Where do you get all the news?"

This question frequently comes up in conversation with readers who express amazement at the ever-increasing volume of news about refrigeration published in this paper.

Obviously the editorial staff, which is fairly large for a business publication, cannot be everywhere at once even with such a restless traveler and prodigious writer as George Taubeneck in charge.

Paid writers and reporters account for many columns. Generous contributors supply quantities of material, much of which, unfortunately, cannot be used.

Among the other important news sources are individuals whose names seldom appear in print, who never write an "article" but who keep a watchful eye on some particular field of industry activity.

For example:

Fremont Wilson

A few days ago Mr. Wilson dropped in for one of his occasional stop-overs between New York and Chicago.

"What do you know about this deal Frigidaire is trying to put over with F-12?" asked Mr. Wilson.

"Not a thing. What about it?" says I. "Why, there is going to be a meeting here in Detroit next Tuesday. You know about that, don't you?" says he.

"Never heard of it. What's going on?"

"You're a fine publisher," snorts Fremont, "here it is right under your nose

and you don't know a thing about it."

"We never worry about things like that. You know that we depend upon you to let us know when there is dirty work at the cross-roads. Let's have the plot."

Wilson, veteran of many a battle over codes and ordinances affecting refrigeration, has kept manufacturers' engineers mystified for years as to the source of his income and as to his purpose in "homing in" whenever and wherever a committee is trying to reach an agreement with national, state or municipal authorities.

Known as a bitter antagonist of any and every kind of multiple system, he never misses an opportunity to throw a monkey-wrench into the works whenever an effort is made to give this type of equipment official approval.

Equally strong is his opposition to sulphur dioxide as a refrigerant.

Up until the Chicago code battle in 1929, he favored methyl chloride, but that situation weakened his faith somewhat.

Now he is getting suspicious of F-12, the new refrigerant hailed as the safest of all gases.

So he is busy putting questions to city engineers, safety boards, insurance inspectors. After he gets through asking questions (which they cannot answer) they are suspicious too.

"All I want is safety," says Mr. Wilson. "I'm just trying to save the industry."

"Don't ask me who I'm working for," he adds, "because I won't tell you."

Kelvinator Figures

In the preceding issue of the News, July 15, was published, for the first time, a financial statement of a major electric refrigeration manufacturing company giving actual figures for unit sales and dollar volume of business for a current period.

Again Kelvinator does a worthy pioneering job.

Whole-hearted congratulations to George W. Mason, president of Kelvinator, also to Henry Burritt, and his sales organization.

Only six months ago the first reliable figures for the industry as a whole were published in the News.

Since that time we have been anxiously waiting for the quarterly, or monthly, figures to be collected through the National Electrical Manufacturers Association, refrigeration division.

Until the totals for the industry are made available regularly it seemed hardly worth while to propose publication of company figures.

Now that Kelvinator has set the pace we will look forward to other authentic company statements giving actual production or sales in units and dollars. Such news is pretty sure to get top column, front page position.

Declining Spices

According to history Columbus sailed west hoping to find a new route to the East Indies where spices were produced, the supply via the eastern route having been cut off by warring nations.

Spices were needed to preserve food in those days and were used freely to neutralize the odors of decay much as perfumes were used to offset E. O.

Spices were less in demand in countries where natural ice was available. The advent of cold storage by mechanical refrigeration doubtless reduced the demand in localities outside the natural ice belt.

A recent survey of the spice trade shows that the purchases of spices have dropped from 52 cents per capita in 1924 to 40 cents per capita in 1930.

The spice industry has reorganized its trade association and plans cooperative advertising and research for new uses and new appeals for spices.

Looks like another industry is a little late in getting started.

The modern child, fed according to the book on food kept fresh by refrigeration, scarcely knows the taste of spices.

Jewish Stylists

H. G. McComb visited the News office last week full of ideas and enthusiasm. He is assistant to V. W. Collamore, sales manager for Majestic.

He thinks that what the electric refrigeration industry needs is some smart Jewish merchandisers to teach the Gentile engineers how to put style into an electric refrigerator.

"A Jewish boy with two or three hundred generations of merchandis-

ing art in his system," says Mr. McComb, "knows more about selling goods when he is born than a Gentile of Puritan farmer ancestry can learn in a lifetime."

"Look at the way they sell clothes to American women," he exclaims. "They run over to Paris and Berlin and Vienna and find doodads and dingfods and bring them back while they are new and surprising."

Mr. McComb is rarin' to go. He wants to make refrigerators more attractive and find a lot of cute little dinkuses to put in the refrigerator or to use with it.

"Look at this," and he shows a leaflet illustrating a metal tray for holding eggs.

"Can't we find some ways to sell refrigerators without driving housewives mad with doorbell ringing, repeating the same old story, and making a general nuisance of ourselves?" he asks.

His views are somewhat in accord with the "related merchandise" ideas expressed in this column last issue.

Hips Needed

An electric refrigerator looks too much like a goods box painted white, thinks McComb.

Perhaps the refrigerator needs some hips, he muses. Look at the other pieces of attractive furniture which are built a little wider below the waistline. Consoles and things.

The trouble about the Jewish boys, as I see it, is in the fact that they have to run over to Paris and elsewhere to find things to COPY. They are not so good at inventing things, particularly where machinery is involved.

But that observation probably applies to Gentiles as well. If he is a good merchandiser, he is not a good engineer, and vice versa.

Uniformity

During the past couple of years the electric refrigeration industry has been very busy making the product reliable, durable, quiet, convenient and reasonable in price.

And I had the idea that this year's line, for most of the well-known makes, presented a uniformly good appearance.

They are rather uniform, it is true. We have to watch cuts in the News office for it is sometimes difficult to tell them apart, if the name-plate does not show up under a magnifying glass.

Making changes in a mechanism of steel, with intricate internals, evolved after much scientific investigation, which can be produced economically only in large quantities, after enormous expenditure for tools and dies, cannot be compared to whacking a piece of cloth with scissors.

Engineers' Dreams

Changing models in a mass production operation means not only huge cost, but also precise coordination of an infinite number of details.

Engineers dream dreams and see visions too. They like to play with new models in the laboratory, they also wax enthusiastic over new ideas and new designs.

But getting into production. That is another story.

Twin Baby Cab

A Detroit mother wanted to sell a twin baby cab recently, having firmly decided that it should not be needed again.

After two weeks of strenuous effort she was still unable to locate a prospective buyer in the neighborhood. Then she adopted a new plan.

By checking the vital statistics column in the newspaper, she quickly secured a list of mothers of twins who were real prospects.

She had learned an important element of salesmanship—how to pick prospects.

One of the most successful electric refrigeration companies believes that the problem of finding live prospects in these days is largely a matter of selection. The sales manager says:

"If the man is out of a job, don't bother with him. There are plenty of people who still have jobs, whose income has not been reduced, whose living expenses are lower today and who have more money in the savings account than ever before.

"Select your prospects."

SALES PLAN REACHES 5,000; COSTS \$350

ARLINGTON HEIGHTS, Ill. — For \$350, the Dreyer Electric Co. here, Westinghouse dealer, staged a sales promotion stunt that put Westinghouse electric refrigerators before the eyes of 5,000 persons while they were in the best of humor. They were being entertained—free.

Under the direction of John H. Sutter, in charge of the refrigeration, the firm hired a motion picture theater for two nights, gave out 3,500 free tickets to citizens of the town and the surrounding territory, hired a dance band to play for two street dances, and was careful to impress the public that no rapid-fire sales talk was going to be mixed with the fun.

Labelling the affair as the Dreyer Second Anniversary party, the company announced through advertisements that free tickets for the show would be given out to anyone who came to the store after them. All tickets required a signature to be valid, which requirement facilitated compilation of a good prospect list.

Three shows were given each night, and at each performance of the regular feature picture, the theater was packed, according to R. L. Sanner, director of retail sales development of the Westinghouse Electric and Mfg. Co., Mansfield, Ohio.

After each presentation of the feature picture, Mr. Sanner gave a 12-minute talk on the Dreyer company, and the Westinghouse electric refrigerator. Then everyone was invited to attend the dance in the street outside, where the orchestra and a set of amplifiers attached to a phonograph alternated in playing for the dance.

As each person left the theater, he was given a packet containing literature on Westinghouse refrigerators. At 11 o'clock each night, a drawing was held, and three prizes were given to persons holding winning numbers on the stubs of their theater tickets.

Special window displays and decorations for the interior of the store were used by the Dreyer brothers during the week of the anniversary party.

SURVEY SHOWS 41% OF FARMERS BUY APPLIANCES

NEW YORK—In a survey conducted in 108 widely scattered farm homes by Lord & Thomas and Logan for General Electric Co., the returns showed that 41 per cent of the answerers had purchased electric appliances within the last six months, according to Colin G. Jameson, of the agency.

Questionnaires were sent to 200 wired rural homes and 108 replies were received. The units purchased totalled 95.

Although only eight electric refrigerators had been purchased by the 108 homes in the past six months, as compared with 10 iron and 15 radios, a 10 per cent greater outlay was made for refrigerators than any other item.

The total value of refrigerators purchased was \$2,080, and of radios, \$1,875.

COAST FRIGIDAIRE DEALER MOVES TO NEW HOME

LOS ANGELES—Home Utilities Co., Ltd., Frigidaire distributor, has taken new quarters in the recently constructed Pantages Theater Bldg. Corner space is occupied by the Belsey Co., G. E. distributor on the coast. Another reported change is in the Glendale dealership which has been taken over by S. Gilberg, succeeding Harry Baker.

According to the local sales office, Frigidaire is keeping up its quota which is more than last year. Recent installations by Hazlerigg, Foy and Candee of the apartment house division include a 75-multiple unit job in an apartment house at 330 S. Grand Ave. and a 65-multiple unit installation in an apartment house at 5555 Hollywood Blvd., Hollywood.

KANSAS CITY DISTRIBUTOR PICKS DEALERS

KANSAS CITY, Mo.—Sterling Radio Co. has appointed the following Majestic electric refrigerator dealers:

Ross Sales Co., Coffeyville Kan.; Chrisman Mercantile Co., Pittsburg, Kan.; Culver Radio Co., Plattsburgh, Mo.; Hirlinger Furniture Co., Excelsior Springs, and Coffman Hardware Co., Lawson, Mo.

REFRIGERATION RUBBER WARE

Door and Frame Insulating Strips. Gliders for Refrigerator Legs. Top Hole Sections. Lid Collars, Sleeves, Brine Hole stoppers for Ice Cream Cabinets, etc. Specializing in Parts Made to Customer's Design.

THE AETNA RUBBER CO. ASHTABULA, OHIO

New Yorkers at Kelvinator



Nine salesmen of Elmira Water, Light & Railway Co., Elmira, N. Y., were guests recently at the Kelvinator factory in Detroit. The trip was given as a reward for selling 30 or more units in a 30-day campaign.

ELECTRIC SERVICE, INC., MADE FRIGIDAIRE DISTRIBUTOR

NEW ORLEANS—Electric Service, Inc., of which E. W. McKinney is president, and John F. Roth, secretary and treasurer, has taken over Frigidaire distributorship, covering New Orleans and eight surrounding counties. This company also distributes Philco radios.

SEATTLE DEALER ADDS TWO TO SALES STAFF

SEATTLE, Wash.—H. W. Moodman-see and R. V. Waggoner have been added to the sales staff in the Servel division of Harper-Meggee, Inc., R. F. Meggee, president, announced.

J. C. Williams is general manager of the company's Servel sales division.

General Electric Earns \$141,428,978

SCHENECTADY—Orders received by the General Electric Co. for the first six months of 1931 amounted to \$141,428,978, compared with \$190,313,758 for the corresponding period last year, Gerard Swope, president, announced recently.

Sales billed for the six months of 1931 amounted to \$141,180,091.13, compared with \$197,229,346.82 for the corresponding period last year.

Profit available for dividends on common stock for the first six months of 1931 was \$21,523,722.88, compared with \$29,273,276.14 for the first six months last year. The profit available for common stock for the six months is equivalent to 75 cents per share in 1931 and \$1.01 per share in 1930 on the 28,845,927 shares outstanding in both periods, the report shows.

The quarterly dividend is 40 cents a share.

The stockholders to whom the July dividend is to be distributed total 133,163, compared with 116,750 at the end of 1930, and with 88,408 in July, 1930, an increase of 50 per cent in stockholders over a year ago.

WESTINGHOUSE VICE PRESIDENT SUCCUMBS

SHELBY, Mich.—Truman P. Gaylord, 60, vice president of the Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., died suddenly here at his boyhood home, where he had been visiting his mother.

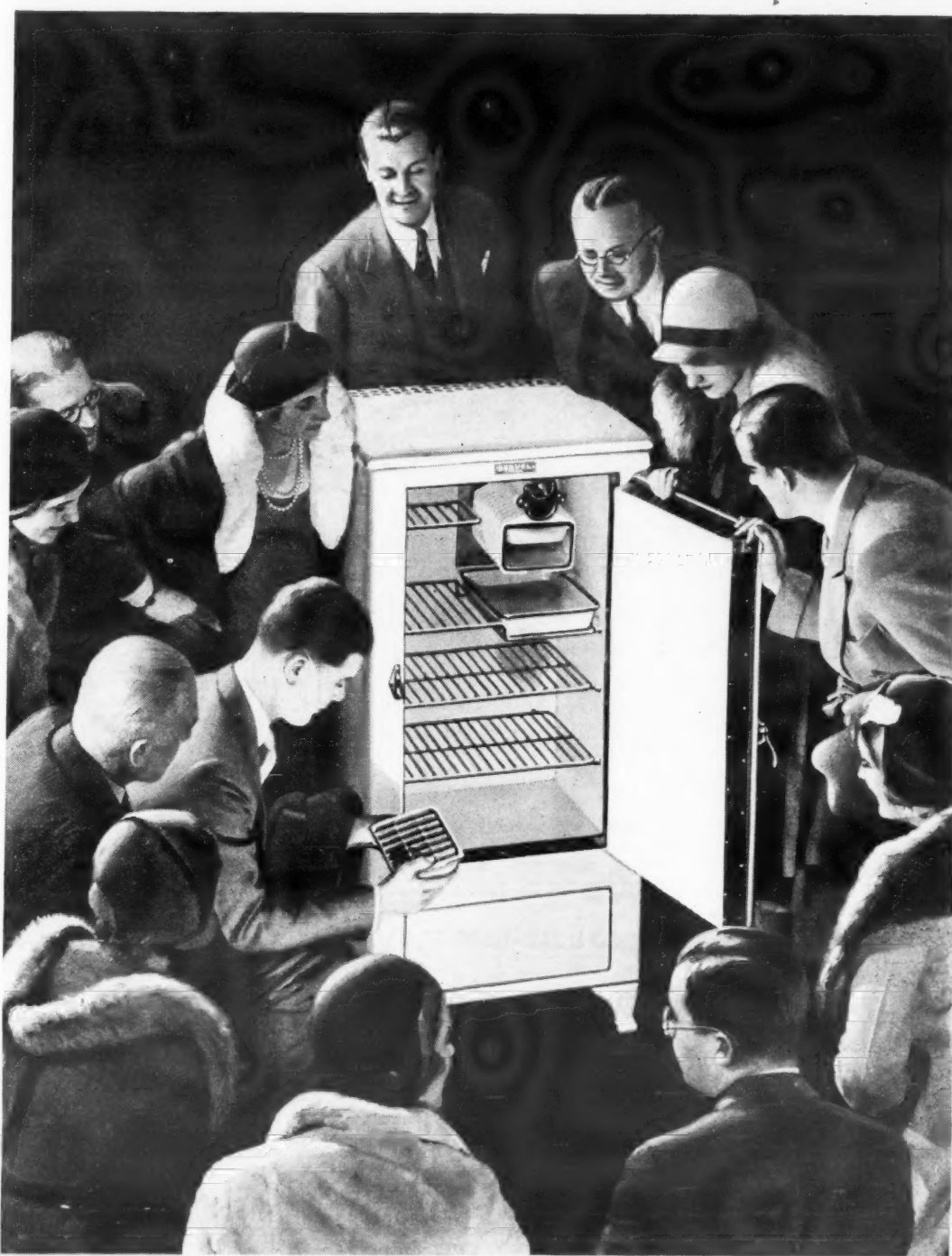
Mr. Gaylord was born in the town where he died. He attended the Allen Academy of Chicago; the University of Michigan, from which he was graduated with the degree of electrical engineer; and Armour Institute of Technology, from which he secured a degree in 1895.

He was associated with the Commonwealth Edison Co. from 1898 to 1899, when he entered the employ of the Westinghouse Electric and Mfg. Co.

He was appointed district manager of the Westinghouse company's Chicago office in 1902, the position he occupied until he was made acting vice president in August, 1914. He was elected vice president in April, 1929.

Mr. Gaylord was elected to directorship in the Pittsburgh chamber of commerce in 1926, and in 1927 was chosen president of that organization, an office he held until 1929.

Simplified Refrigeration



SALES RECOVER SHARPLY in August!

FOR years refrigeration dealers used to lock up and go for a vacation in August. They figured business would be pretty slow.

But careful study of actual results proves this is a costly mistake!

Demand for household refrigerators recovers sharply in August—keeps vigorous clear through September. Thousands of customers decide not to "wait another year". Thousands more realize that refrigeration is a twelve-month's necessity—and buy now!

Push Simplified Refrigeration Now!

Make a special drive for this profitable August and September business—with the Servel Hermetic.

In the Servel Hermetic you have truly *Simplified Refrigeration*. You have a list of selling points that no other refrigerator on the market today can equal. You have a quick market—built by powerful and consistent national magazine advertising and local newspaper advertising.

Write now for full details of our attractive dealer plan.

SERVEL SALES, INC.
EVANSVILLE, INDIANA

A complete line of household and commercial refrigeration

SIMPLIFIED REFRIGERATION

Hermetically sealed unit... No kitchen repairs... No intricate adjustments... No replacement of parts... Fewer moving parts... No moving parts exposed... Costs less to operate... Quietest electric refrigerator... Handy temperature control... More usable shelf space... Beautiful, graceful cabinets... Flat, usable top... No installation problem...

Quick Facts

THE NEW **SERVEL** HERMETIC

3,182 UNITS SOLD BY GEORGIA POWER CO.

ATLANTA—(UTPS)—Two thousand seven hundred and sixty-four domestic units and 418 commercial units were sold in the Georgia Power Co. electric refrigeration sales campaign which closed June 30.

Of this number, 1,200 domestic and 155 commercial units were sold in Atlanta and the balance in outside districts.

The commercial sales represented expenditures of \$190,073 and the domestic of \$768,055.

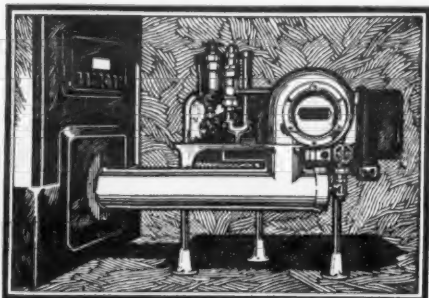
Estimating the average annual consumption at 900 KWH, the new annual increased consumption will amount to 2,863,800 KWH.

TENNESSEE SALES TOTAL \$230,611.36 IN CAMPAIGN

CHATTANOOGA, Tenn.—The Tennessee Electric Power Co. has completed a six weeks' Frigidaire campaign in which 131.8 per cent of \$175,000 quota, or \$230,611.36 worth of electric refrigerators, were sold.

A. L. Jordan, middle Tennessee district, led all salesmen with 388.7 per cent of his \$2,500 quota sold. W. H. Ridley, Cumberland district was second with a record of 334 per cent of his quota sold. J. F. Campbell, North Tennessee district, finished third with 316.5 per cent, and P. J. DuPre, Middle Tennessee district, fourth with 293.3 per cent.

All of the company districts exceeded their quotas, as did also 30 of 45 salesmen and 35 of 48 retail stores. Middle Tennessee district led all others with a record of 214.3 per cent. Goodlettsville's retail store, with 504.5 per cent



QUIET MAY OIL BURNER DEALERS

gross **40%** and up

And it's a gross that has a world of net for electrical refrigeration dealers. It is not eaten up by costly demands for service. Words of satisfaction are about the only things dealers ever hear from a QUIET MAY.

Your slack season will soon be here. Right now you want to be figuring on something to keep the money rolling in. A QUIET MAY franchise will do it. It is doing it for other electrical refrigeration dealers.

QUIET MAY stands 100% behind every dealer. Real factory sales and engineering support in the field; a smashing advertising campaign planned and tested to make sales for you are but two of the features that make the QUIET MAY franchise the standard by which all oil burner franchises are measured.

But don't take our word for it. We'd rather have you write direct to electrical refrigeration dealers who are making a success of QUIET MAY. Just ask us for their names. Address:

New Business Division
May Oil Burner Corporation .. Baltimore, Md.

QUIET MAY

AUTOMATIC OIL BURNER

Collecting Majestic Fish Stories



Forty-one and three-quarter pounds of trout were caught by dealers of Intermountain Majestic Co., distributor of radios and refrigerators, in early morning fishing at Denver, Colo. The dealers were entertained at break-fast at Lakewood Country Club, at which they ate their own fish. The golf tournament followed.

of its quota sold, led all local offices. Thirty-one local managers, who sold 150 per cent of their quota or better and 24 salesmen who were in the same category, attended a two-day surprise party at Appalachian Club in the heart of the Great Smoky Mountains.

ASHEVILLE DEALERS HOLD FIRST REFRIGERATOR SHOW

ASHEVILLE, N. C.—Five refrigerator dealers cooperated with the Asheville Citizen-Times in the first electric and automatic refrigerator show from July 13 to 15 in the ballroom of the George Vanderbilt hotel.

Mayor Otis Green officially opened the show by pushing an electric button which started the freezing mechanisms of the various refrigerators on display.

A special vaudeville program of five acts was staged the second evening of the show.

The Carolina Power and Light Co., Kelvinator and General Electric distributor, displayed 5 cu. ft. and 9 cu. ft. Kelvinators and 5½ cu. ft. and 8 cu. ft. G. E. models. On deck at this booth were J. G. Richards, commercial manager of the Carolina Power and Light Co., in charge; T. Miller White, general superintendent of the company; and L. C. Dobbin and D. G. Covington, salesmen.

Exhibiting Models 140, 150, and 170 of the Majestic line, H. A. Durham of Durham's Music House was aided by Charles Deming, L. S. Neville, and L. B. Harding of the same firm. On hand also was Furman Ferguson, sales promoter for Shaws, Inc., Majestic distributor in Charlotte.

The Asheville Gas Co. displayed Electrolux models in 5, 6½, and 8 cu. ft. sizes. H. E. McDonnold, general manager of the company, was in charge, with R. B. Parker, S. Martin and Miss Katherine Jones assisting. Mrs. Dick

Persistence Pays

MANHATTAN, Kans.—Persistence pays big dividends to the electric refrigerator salesman. T. W. Jeffrey, salesman for the United Power and Light Corp., presents the latest example of this.

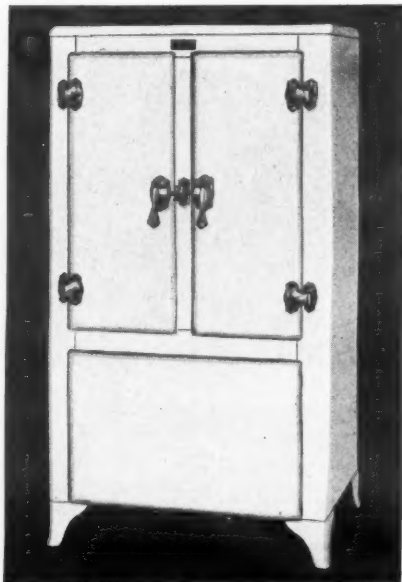
For three years Salesman Jeffrey tried to sell electric refrigeration to the owner of a sizeable Manhattan apartment house. Repeatedly he was turned down. With every improvement, every new model, every new selling aid, he approached the apartment owner throughout the three years. A few days ago, when Jeffrey least expected it, the apartment owner walked into the display room.

A short time later Jeffrey watched his three-year-old prospect sign on the dotted line for 10 four cu. ft. and one five cu. ft. Frigidaires.

Briggs, demonstrated the making of salads and gave recipe suggestions.

The 4, 5½, 7, and 9 cu. ft. sizes of the Frigidaire were shown by W. J. Reusing, president of the Reusing Radio and Refrigerator Co. Aiding Mr. Reusing were R. M. Williamson, R. B. Smith, and W. A. Cranford of the same firm.

The Bon Marche department store exhibited the 3, 4, and 5 cu. ft. sizes of the Servel refrigerators.



Style "O"
One of three models of utmost distinction

Each carries a

3½

Year Guarantee

STARR FREEZE Electric Refrigerators

BEAUTY

RELIABILITY

VALUE

Write for Our Liberal
Dealer Proposition

THE STARR COMPANY

RICHMOND INDIANA

ELECTROLUX DEALER REPORTS 292% GAIN

PHILADELPHIA, Pa.—An increase of 292 per cent in the first six-month sales of Electrolux refrigerators over the same period for 1930 is reported by C. R. Logan, refrigeration sales head for Philadelphia Gas Works Co.

An increase of 257 per cent was recorded in the first quarter, while the second quarter sales gain was 314 per cent.

A general sales meeting was held once a month during the three-month "AMAJU" campaign, and a small home-made monthly magazine, or bulletin, was published.

Cash bonuses over and above the regular sales commissions were offered to salesmen and supervisors, based on individual quota production. The top cash bonus was awarded to Martin J. Ryan, a salesman in the Frankford-Kensington district, who made 48 Electrolux sales during the three months. The second largest bonus award went to Charles V. Farno, of the same district, who booked 41 orders.

The wind-up of the "AMAJU" campaign was a picnic at Penn Hills Tavern, five miles above Stroudsburg, Pa., in the foothills of the Pocono mountains.

A summer drive is now being promoted which is called the "C. C. C." ("Cubic Capacity Campaign"), with a cash bonus to salesmen for every cubic foot of refrigerators that they sell during July and August,—a minimum of 45 cubic feet sold being necessary to qualify as a bonus winner.

NEW ENGLAND FRIGIDAIRE SALESMEN TAKE BOAT RIDE

BOSTON—Under the direction of John S. Pfeil, assistant manager of the Frigidaire Sales Corp. of New England, 400 salesmen and executives last week celebrated the fifteenth anniversary of the Frigidaire Sales Corp. of New England.

The meetings were held at the company's new headquarters here, where H. W. Newell, manager, was principal speaker. Billy E. Van, well known New Hampshire humorist, was guest speaker at the banquet.

The program of entertainment included an American League baseball game between Boston and St. Louis, and an all-night cruise of Massachusetts Bay on board the Steamer Gov. Dingley.

The committee in charge, which assisted Mr. Pfeil, was composed of J. F. Cain, Boston; H. A. Crowley, Dorchester; F. F. Doten, Somerville; L. C. Fuller, Brookline; E. H. Richardson, Waban; L. M. Rhode, Dedham; J. T. Shaughnessy, Roxbury; L. F. Simcock, Brighton, and A. R. Thomas, Cambridge.

665 G. E. UNITS PURCHASED FOR 2 N. Y. APARTMENTS

NEW YORK—Six hundred and sixty-five General Electric refrigerators will be installed in the Majestic and Century apartments which are being erected by Chanin Construction Co., Inc.

The sale was made by Henry Miserocchi of Rex Cole, Inc.

In the Majestic, 246 refrigerators will be installed, while 419 will be placed in the Century. Both buildings will be ready for occupancy in the fall.

FLORIDA COMPANY NAMED G. E. DEALER

ST. PETERSBURG, Fla.—(UTPS)—The Gulf Radio Sales, Inc., has been appointed General Electric dealer.



1-6 to 3 Horsepower

ASSEMBLE YOUR OWN CONDENSING UNITS

A complete line of sulphur dioxide, methyl chloride and ammonia compressors for household or commercial purposes ready for immediate delivery.

Working drawings showing how to assemble complete units are available

H. C. PARKER, LTD.

General Offices & Factory H. L. Fowler, Mgr.
2600 Santa Fe Ave. 15 Moore St.
Los Angeles, Calif. New York City

STOCK CARRIED AT BOTH POINTS

Little Stories of Interesting
PEOPLE
In the Refrigeration Industry

THE EXPANSION VALVE

By George F. Taubeneck

Little Stories of Interesting
IDEAS
In the Refrigeration Industry

Speed, Thrills, Growth

As announced in this issue, *ELECTRIC REFRIGERATION NEWS* will become a weekly newspaper in September. That announcement, gentlemen, gives the editorial department of this yere sheet a genuine thrill.

We are all news-minded around this place, and nothing pleases us more than the knowledge that we have been first to bear the glad tidings from Ghent to Aix.

Smoothed-out production schedules will aid us, we think, in cutting down the time between the making up of the News and its arrival in the subscribers' hands. All of which, of course, improves the paper's service.

Preparatory to putting *Electric Refrigeration News* on a weekly basis, and bringing out *Refrigerated Food News*, we have been growing a bit in the editorial department.

In the last issue the appointment of John R. Adams as assistant editor was announced.

Mr. Adams is a very substantial fellow who extends 6 feet 3 inches up into the air, and whose number 12 feet (one-half size larger than the shoes worn by the editor) support 214 pounds of avoirdupois.

His size has placed no handicap upon his speed and drive, for he has fitted into a responsible job here in record time.

When the new *Refrigerated Food News* appears, you will find the name of Phil Redeker on the mast-head.

Mr. Redeker is a smart, red-headed young man who can write, who has a background in the cold storage industry, and has had some intensive journalistic experience. You will hear more from him later.

By-line stories by Elston D. Herron appeared in the last issue of the News, again in this one, and will surely be found in the next.

Herron is a crackerjack special reporter. (A Detroit news source, to whom we sent Herron in search of a story, told us later: "That young fellow could make a wooden Indian talk.")

As noted in the "Display Case" kolyum in the *Refrigerated Food Section* of this issue, we have been spending considerable time perfecting our plans during the last few weeks, and to facilitate and speed up the job, we're all living and eating and debating together in a cottage on a lake within commuting distance of Detroit.

One result of this organization period is that the editor has stuck close to headquarters. Hence, we're not going to talk about a great many people, or a great many ideas.

E. G. Biechler

Instead we're going to do what we've wanted to do for a long time: Tell the story of one man, a man who has been one of the most discussed, best known, most wondered-about men in the electric refrigeration industry, E. G. Biechler, president of the Frigidaire Corp.

Once upon a time (now go on with the story).

In previous numbers of this kolyum, the Valve has described Mr. Biechler's heavy build, straight dark hair, large square head, and vigorous manner.

We have tried to tell something of the vibrancy of his voice, to picture the driving energy which seems overflowing always, and to point out how genuinely human he can be.

Dynamic Personality

What we have failed to do—and what we shall continue to do inadequately so long as words and photographs are our only tools—is to convey to the man who has never seen Mr. Biechler some manner of comprehension of his abundant outpouring of life.

He gets little exercise outside of his job. Yet his health is exuberant, and his physical powers seem like those of a professional athlete. One never sees him when he does not have a full head of steam up, and when he is not running in high gear. Seemingly his energy is inexhaustible.

His own explanation of his rise to the presidency of Frigidaire Corp. (he will be just 42 years of age on

August 31) is that he got there by "main strength and awkwardness." He will also tell you that he has tried never to leave any margin between his capacity and his output. And what a capacity!

A relentless driver, he gears his organization up to high speeds by the force of his own example. Keeping up with the terrific pace he sets, his associates will tell you, is a tall job.

"Dynamic" may be overworked as an adjective, but nothing else seems to fit President Biechler quite so well.

He Goes to Work

Elmer G. Biechler was born at Miamisburg, Ohio, 11 miles south of Dayton, August 31, 1889. He is an only child.

His parents were Pennsylvania Dutch, to whom work was a religion. Labor has always seemed as natural to him as eating and sleeping.

From his father, who eventually became general agent for the Cincinnati district of the New York Life Insurance Co. and who was one of the ranking salesmen of that organization, the son gained some knowledge of, and appreciation for, good salesmanship.

Prophetically, his first job was for a refrigeration firm. Before he was 12 years old he was keeping the valves cleaned and the brass polished in a Miamisburg ice plant! For this task he received the handsome sum of a dollar and a half a week.

Not long thereafter we find him in an enterprise which again might be considered prophetic by a biographer. He organized and was made president of a company—to build snow sleds.

Under his direction a gang of Miamisburg boys got together, collected the materials, built their own sleds, sold them to their fathers at prices 25 per cent under the market value of toboggans, and realized 100 per cent profit on their investment.

Six Hundred Dollars

Mr. Biechler was graduated from the Miamisburg high school, which marked the end of his formal schooling.

During the last two years of his high school life, he was night operator of the Miamisburg telephone exchange.

His trick began at 9:30 o'clock in the evening, and ended at 6 o'clock in the morning. Inasmuch as most of the subscribers to the exchange were farmers and had gone to bed by the time Biechler arrived at his switchboard, he usually had time enough to do all his studying while on duty.

About 3 o'clock in the morning, however, the subscribers began to roll out of bed, and from then on until he left his post the calls multiplied like guinea pigs.

"There was one old codger," says Mr. Biechler, "who made it a rule to call me every morning shortly after 3 o'clock. His only object was to see if 'thet young whipper-snapper wuz on the job!'"

At the age of 16 he spent a summer vacation working in the paper mill at West Carrollton, which is about three miles north of Miamisburg. The following summer he worked for the Miamisburg telephone exchange as a full-time lineman, digging post holes, helping erect poles, stringing lines, and installing instruments.

While thus employed, the superintendent of the West Carrollton mill asked him to come back to his previous job. Mr. Biechler is quite proud of that invitation, for it meant that he had secured recognition on his first real full-time job.

By the time he was 17, he had saved six hundred dollars. But not long thereafter the building and loan association, in which he had invested his capital, went on the rocks. And that loss of all his savings, avers Mr. Biechler, taught him a lesson.

He Goes to Dayton

Dayton, which was but a few miles away, was the "big city" which attracted ambitious country boys in that section.

Mr. Biechler was no exception. When, at the age of 18, he had been graduated from the Miamisburg high school, he sought work in Dayton.

He answered an advertisement in a Dayton newspaper, and got a job as shipping clerk for the C. W. Raymond Co., manufacturer of clay-working machinery.

The pay was just five dollars a week, less than half what the telephone company would have given him to stay in Miamisburg.

For 11 months his chief duty was that of writing out shipping tags by hand. He tackled every odd job that was lying around, however, and worked far into the night to keep his records up-to-date.

Although his extra work seemed to make little impression on the higher-ups at the time, his chance came just 18 months after he had joined the Raymond organization.

Several officials of the company withdrew to form another organization, and Mr. Biechler was made the company's purchasing agent.

A year later he was selling his company's products in a territory consisting of six middle western states.

Enter The Woman

Within a few months after becoming a salesman, Mr. Biechler learned that the Chambers Bros. Co. of Philadelphia, also a manufacturer of clay-working machinery, was seeking a man to replace a recently deceased Western manager.

From a field of 12 applicants Mr. Biechler was chosen for the job. Although only 22 years old then, he was placed in charge of six salesmen.

During the course of two and one-half years on the job, he boosted the business of the Philadelphia firm in creditable fashion.

After getting himself thoroughly acclimated to his new job, Mr. Biechler visited the old home town. A friend asked him to deliver a message and a small parcel to a girl who lived in New Jersey, not far from Mr. Biechler's abode in Philadelphia.

Miss Elise Sleator of Merchantsville, N. J., looked upon the messenger in much the same fashion that Priscilla looked upon John Alden (when the latter sought to intercede for Miles Standish); for an intensive courtship began at once between the pair.

In 1914, scarcely more than a year after they had met, Miss Sleator and Mr. Biechler were married.

When Delco Was A Pup

Like a great many women, Mrs. Biechler objected to a part-time husband, and soon after their marriage Mr. Biechler began to look for a job that would take him off the road.

He had been keeping in touch with Dayton affairs, and had been watching a lusty young industrial infant, the Dayton Engineering Laboratories Co. (known better as the Delco Co.) rather closely.

At that time Delco was entirely occupied with manufacturing electric starters for automobiles.

After some negotiations with this outfit, Mr. Biechler left his job with the Chambers Co. and joined Delco as traffic manager—at a lower salary than he had been getting.

Again he found that his job didn't provide outlet for his abundant energies, and again he began appropriating unto himself all the miscellaneous odd jobs he could find until he was laboring far into the night.

Delco starting, lighting and ignition systems were finding a ready market in the rapidly moving automobile industry. But one day there came from Florida an order for two Delco lighting systems from a man who, according to the records, already possessed one Delco and had only one car.

Curious, Delco sent an engineer down along with the order. Back came the engineer with the information that these two Delcos were to be hitched to a gasoline engine

and then used to light the Florida man's house.

Immediately Charles H. Kettering set to work to make a real farm lighting plant and, being Charles H. Kettering, he succeeded.

The Delco-Light Co. was formed to market this product, and Mr. Biechler was made both traffic officer and purchasing agent for that organization. R. H. Grant was president. That was in March, 1916.

Up The Ladder

Business kept on picking up for the new Delco-Light Co., and Mr. Biechler continued to go the extra mile on his job. In November, 1918, he became assistant sales manager. Two months later he became sales manager.

In that capacity he continued until Feb. 1, 1924, just five years to a day since he had been promoted to the sales managership. On the last-mentioned date, Mr. Grant was shifted by General Motors (which had purchased Delco some little time before) to the Chevrolet Motor Co.

Mr. Biechler became acting general manager of the Delco-Light Co., and five months later was named general manager.

To this latter title was added that of president, Aug. 20, 1924.

At that time Delco-Light was manu-

facturing and selling Frigidaire electric refrigerators, in addition to the farm lighting units.

When this new business was incorporated as a separate subsidiary of General Motors in September, 1926, Mr. Biechler was named president and general manager of the Frigidaire Corp.

He has been functioning in that capacity ever since, and his record is that of Frigidaire. Of which you have probably heard.

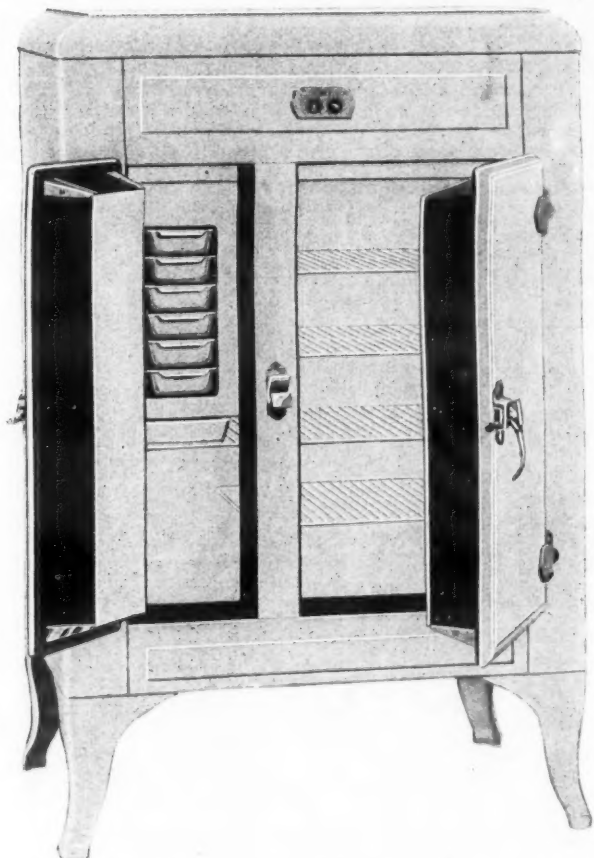
Public Citizen

Both the Kiwanis Club and the Masonic Lodge claim Mr. Biechler as a member. He is president of the board of trustees of the Miami Valley hospital, in which he takes a keen interest.

Public spirited? Listen to this: Four years ago the citizens of Dayton asked him to direct the annual Community Chest drive. This task had never been done particularly well before, and it usually took quite a while to get a satisfactory amount of cash into the coffers.

Mr. Biechler organized his crew, held pep meetings, and opened up the bag of tricks he had collected during his days as a sales manager. Within three days the quota was topped—an unparalleled achievement in Dayton history.

G HIGH QUALITY—LOW PRICE

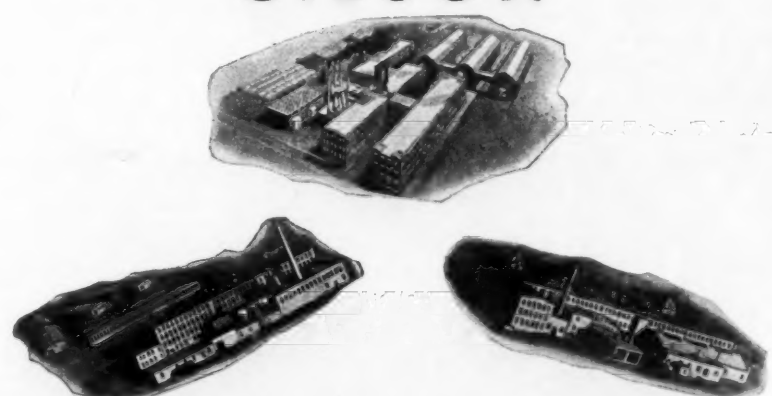


The exceptionally low price of these high quality cabinets challenges your attention. Precision built, by craftsmen long versed in the art of electric cabinet building, Gibson presents to you, today's greatest cabinet value.

Write at once—Let us quote on your requirements.

GIBSON REFRIGERATOR CO.
Electric Cabinet Division
GREENVILLE, MICHIGAN

GIBSON



Three Great Plants to Serve You
Capacity - 2000 Cabinets Daily

LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other material recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

ElectricAire

Explaining the operation and advantages of ElectricAire, sanitary clothes dryer, there comes from Rochford-Sears, Inc., 1120 S. Michigan Ave., Chicago, a new and attractive little folder for circularization among prospective buyers.

In appearance, the product resembles a large umbrella with the cloth removed. Its "staves" may be opened out, and from them, wet clothes may be suspended. A bowl-shaped electric heater, in which the pole holding the hangers is placed, radiates heat upon the clothes, drying an entire washing in 30 minutes, according to the manufacturer.

Imitation Food Products Co.

A business-like little eight-page booklet is being mailed by the Imitation Food Products Co. of Brooklyn, N. Y., to merchants throughout the country who have occasion to use food displays in windows, counters, or refrigerators.

A complete list of products manufactured or imported by the company, with their prices, is printed, together with two group illustrations of imitation meat and dairy products. The last page contains excerpts from letters sent to the manufacturers from customers.

Mitycold

A concise resume of all features, specifications, and market possibilities of Mitycold electric refrigerators and water coolers comprises a new four-page circular being issued to prospective distributors by the Mitycold Corp. of Chicago.

Other than two illustrations of household models on the front page, and one of the compressor unit on page three, the publication is composed entirely of printed material, and outlines the entire proposition of the company to any person who takes a Mitycold distributorship.

It discusses franchises, mechanisms, prices, advertising features, merchandising plans, and territory assignments.

Super Automatic Ice Man

Prospects are receiving from dealers of the Super Oil Heater Sales Co. of Hartford, Conn., an 8 1/2 by 11-inch, four-page folder outlining features of the Super Automatic Ice Man, a freezing unit which may be installed in any ice box.

The two middle pages open to form a spread, in the center of which is a shaded illustration of an ice box transformed into an electric refrigerator by the appliance. Over the picture is printed a list of its features.

On both sides of the picture are other pictures of the unit in process of installation. The back page bears an illustration of the hooded unit, with the caption, "The guardian of your family's health."

SUBSCRIPTION ORDER

Electric Refrigeration News
550 Maccabees Building
Detroit, Michigan

Gentlemen: Please enter my subscription to ELECTRIC REFRIGERATION NEWS.

United States and Possessions: ☐ \$2.00 per year ☐ Three years for \$5.00
All other Countries: ☐ \$2.25 per year ☐ Two years for \$4.00

I understand that ELECTRIC REFRIGERATION NEWS, which has been issued every two weeks, will be issued every week beginning Sept. 9, 1931.

I also understand that the Refrigerated Food Section, which has been Part II of each issue, will become a separate publication to be issued once a month beginning Sept. 1, 1931, but that I will receive the new paper, REFRIGERATED FOOD NEWS not to exceed one year without extra charge, provided my order or renewal is mailed on or before Sept. 30, 1931.

I am enclosing payment in the form of ☐ Check ☐ P. O. Order ☐ Cash

Name

Attention of

or Care of

Street Address

City and State

Special Rates for Group Subscription Orders

For paid-in-advance subscriptions in United States only. Send check with order. Charge orders are billed at the full rate, regardless of number. Papers will be mailed to individual addresses. This offer expires December 31, 1931.

5 or more subscriptions entered at one time, \$1.75 per year each.	20 or more subscriptions entered at one time, \$1.25 per year each.
10 or more subscriptions entered at one time, \$1.50 per year each.	50 or more subscriptions entered at one time, \$1.00 per year each.

NOTE: The above reduced rates will not apply to orders received after December 31, 1931.

7-29-31

Biechler Starts the Day



President E. G. Biechler of Frigidaire Corp., looks over a stack of orders resulting from the Jubilee campaign which started July 1. A short story of Mr. Biechler's life appears on page 15.

FT. WORTH G. E. DEALER MOVES INTO NEW HOME

FT. WORTH, Tex.—The local branch of Griswold-Rogers, Inc., General Electric refrigerator distributor, with headquarters at Dallas, is now in its new home at 813 Lamar St., two doors from its former location.

Both domestic and commercial activities are carried on in the new branch quarters. The building is partitioned so as to divide the domestic display and commercial exhibit. In the north room a full line of domestic models is on display, while the south room is devoted to commercial equipment.

Home service work will be augmented as the new branch has a completely equipped model kitchen.

P. E. Flemister is manager of the branch and John Parker, Jr., sales manager, is in charge of a force of some 20 salesmen.

WESTERN CONNECTICUT DEALERS NAMED

DANBURY, Conn.—(UTPS)—Electric refrigeration dealers recently appointed in western Connecticut include:

Leonard, Delury Furniture Co., Danbury; General Electric, Stamford Home Appliance Co., Inc., Stamford; Kelvinator, Hampson, Minte & Abbott, Waterbury.

REQUESTS FOR INFORMATION

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address Electric Refrigeration News, mentioning query number.

N. E. L. A. Convention

Query No. 458—"Who is in general charge of the N. E. L. A. convention, and what procedure should be taken to obtain the rental of a booth for next year?"

Answer—Obtain information from L. S. Shugg, director of exhibits, National Electric Light Association, 520 Lexington Ave., New York City.

Sales Figures

Query No. 459—"We would like to know just how many electric refrigerators were sold in the U. S. A. during 1930."

Answer—See Jan. 14, 1931, issue of News for all available data. See also pages 1, 2, 4, and 8 of merchandising section of June 17, 1931, issue; also note article on page 1 of June 3, 1931, issue of News.

Query No. 460—"Can you provide us with a record, by months, of the electric refrigeration sales for the first five months of this year, and last?"

Answer—These figures are not available at present. The Jan. 14, 1931, issue of the News carried the first authentic figures showing yearly sales of the refrigeration industry over a 10-year period. The Refrigeration Division of the National Electrical Manufacturers' Association has recently agreed upon a plan of collection of production figures on a monthly basis.

Copper, Brass U Bends

Query No. 461—"Can you place us in touch with manufacturers of copper and brass U bends of various sizes and radii?"

Answer—See page 7 of Buyer's Guide section of Jan. 14, 1931, issue of News.

Utilities Engineering Institute

Query No. 462—"Will you give me the name and address of the refrigeration engineer's institute in Chicago?"

Answer—Utilities Engineering Institute, 4403 Sheridan Road, Chicago.

COPELAND DEALER CLOSES BRANCH STORE

NEW BRITAIN, Conn.—The New Britain Store Fixture Co., Copeland refrigerator dealer, has discontinued its uptown branch showrooms at 77 Arch St., concentrating its business in the main store at 353 S. Main St. James Truscio heads the concern, while J. O. Bundy is sales manager.

DENVER RESTAURANT BUYS FRIGIDAIRE EQUIPMENT

DENVER, Colo.—The Hoff-Schroeder Cafe Gothic, Denver's newest restaurant, has installed complete Frigidaire refrigeration to take care of its food problems.

GREATER MIAMI ELECTRIC ASSOCIATION ORGANIZED

MIAMI, Fla. (UTPS)—The Electric League of Greater Miami has been formed with Lincoln Brown, Jr., of Brown Electrical Construction Co., as its first vice president.

Guy Severence of the Radio Shop is vice president; F. H. McDonald of Domestic Refrigerator Co. (Frigidaire dealer), second vice president, F. A. Robertson of Robertson Electrical Supply Co., treasurer, and W. C. Allen, Florida Power & Light Co., secretary.

Directors, in addition to these officers, are D. D. Freeman, Florida Power & Light Co.; George LaVigne, LaVigne Electric Co.; Jack Justice of W. G. Patterson, Inc., General Electric distributor; Howard Henshaw of Henshaw Radio & Cycle Co.; Glenn Fields of Gray-Bar Electric Co., and F. A. Coture of Electrochef Sales Co.

WASHINGTON DISTRIBUTORS PLAN CAMPAIGN

SEATTLE, Wash.—Plans for mid-summer selling through a campaign in western Washington were made here recently at the Kelvinator dealer-distributor meeting. Headquarters for the meeting were at the Standard Furniture Co., Kelvinator distributor.

Principal speakers at the meeting were: Berman and Kenneth Schoenfeld, executives of the Standard Furniture Co.; Lawrence Klein, district manager of the Kelvinator Sales Corp.; and E. H. Chamberlain, food supervisor.

NEW APARTMENT HOUSE HAS 33 WESTINGHOUSE UNITS

SPRINGFIELD, Mass.—"The Ambassador," latest apartment house here, has installed 33 Westinghouse refrigerators of the new small type. This is the tenth apartment house equipped by the Electric Device Co. within two months.

DENVER MAN JOINS OMAHA CO.

OMAHA—L. R. Spates, for some time commercial manager for the B. K. Sweeney Co., Denver, has joined the Storz Electric Refrigeration Co. of this city, General Electric distributor, as retail sales manager.

Look!
Read! Act!
For Quick Sale

4 to 5 hundred electric refrigerator cabinets in all models—made by one of the largest manufacturers of electric cabinets—at close out prices.

Finest Quality.
This won't last long.
ADDRESS BOX 350

Care Electric Refrigeration News,
550 Maccabees Bldg.
Detroit, Michigan

THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only).

SPECIAL RATE if paid in advance—Positions Wanted—fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Building, Detroit, Mich.

POSITIONS AVAILABLE

WANTED by prominent electric refrigerator manufacturer in the Chicago area, a refrigerating engineer with complete knowledge of sulphur dioxide in domestic and commercial equipment. Must be able to improve and re-design present equipment. Box No. 352.

POSITIONS WANTED

POSITION wanted with manufacturer of frozen foods by man with nine years' experience in selling and engineering refrigeration jobs. Now located on Pacific Coast, but free to go to any section of the country. Replies also solicited from manufacturers of equipment for displaying frozen foods. Box No. 344.

REFRIGERATION expert, 14 years' experience in engineering and development work on domestic and commercial equipment, accessories and production methods. College graduate. References. Available for position as chief or consulting engineer to manufacturer in need of results. Box No. 347.

SOME manufacturer or distributor can profitably capitalize my fourteen years' experience in the electrical industry, four years in refrigeration, with one of the leading manufacturers and a distributing organization. Actual domestic and commercial direct sales experience, in addition to laying out territory, organizing and training dealer and utility outlets, setting up promotional and advertising activities and campaigns. Available within next thirty days due to sharp retrenchment present connection. Box 353.

BUSINESS OPPORTUNITY

BUSINESS OPPORTUNITY—We wish to sell outright, or in part, fully equipped manufacturing plant now operating and filling orders. We now manufacture a complete line of domestic and commercial compressor units which have been proven by four years marketing. In order to handle our 1932 volume, on a newly developed sealed domestic unit, we must organize completely within 60 days. Address Box 351, Electric Refrigeration News.

FRANCHISE OPEN

MANUFACTURERS may avail themselves of the special rates applicable to The Condenser column to advertise franchise opportunities in specific territories. Advertisements will be inserted under the above heading "Franchise Open." Fifty words or less—only \$3.00 for a single insertion. Three insertions—\$8.00.

Fulco REFRIGERATOR COVERS

Insure perfect delivery to customers without scratches or broken enamel... a big service feature that cuts down complaints and adjustments. Write our nearest plant, giving dimensions of your machines. We also make Dust Covers.

Fulton Bag & Cotton Mills
Manufacturers Since 1870
Atlanta St. Louis Dallas
Minneapolis Brooklyn New Orleans Kansas City, Kan.

NOW READY—A NEW BINDER FOR FILING BACK ISSUES OF THE NEWS

Often you want to refer to a news item, an illustration or an article which was published in the News. How handy it would be to have back copies neatly filed in a manner which would make it easy to find what you want—and to find it quickly.

New binders are now ready. Thirty-six metal retaining strips are provided (the old binders had only 27), to allow for filing separately the individual sections of the paper if you wish. The metal retaining strips are easily inserted at the middle pages and secure the paper without "pinching." Every page lies flat and type matter is easily readable. "ELECTRIC REFRIGERATION NEWS" is neatly stamped in gold on the top cover and on the back edge of these handsome binders. The stiff covers are made of good quality black imitation leather.

When you want to refer to something published in a back issue, a flip of the finger brings the information before you. Buy a binder! Shipped postpaid upon receipt of \$3.75.

ELECTRIC REFRIGERATION NEWS
550 Maccabees Bldg., Detroit.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS
VOL. 5, No. 24, SERIAL No. 126Copyright, 1931, by
Business News Pub. Co.

DETROIT, MICHIGAN, JULY 29, 1931

Entered as second class matter
Aug. 1, 1927, at Detroit, Mich.FIFTEEN CENTS PER COPY
TWO DOLLARS PER YEARLAYOUT VITAL IN
MODEL DETROIT
GROCERY STOREQuick-Frozen Fruits Are
Carried In Modern
Store

By Elston D. Herron

DETROIT—Equipped to sell anything from a dime's worth of potato salad to a truck load of quick-frozen fruits, the 83-year-old firm of G. & R. McMillan opened, on July 13, its new three-floors-and-basement wholesale and retail food store here in the New Center Building. Practically everything in the store is new except some of the 90 employees, and many of the customers, says N. Russell, general manager.

From the smallest island table to the last inch of the 390 feet of display cases, no old equipment has been employed, better to enable the firm to take its new step in proving to the public that "the customer is always right."

While great attention has been given to making the store a place of beauty, this phase of the grocery business has hardly been regarded as tantamount to the efficiency aspect, as is evidenced by the modern mechanical appliances which have been placed throughout the rooms to improve the service, and quality of products sold.

Electric refrigeration plays an important part in the operations of the several food departments. A 12-ton Brunswick-Kroeschell carbonic refrigerating system chills the calcium chloride brine which is circulated through the 73 ft. of Valade refrigerated display cases, and the fresh food coolers.

The same compressor supplies carbon dioxide to the basement vaults, where the quick-frozen foods are kept cold by a direct expansion system. The compressor was installed by the Wallich Ice Machine Co., Detroit.

Quick-frozen fruits and vegetables are kept in a 7x11 ft. room, cooled to 10° F. Frozen meats are stored in a room 8x7 ft. in size, and are kept at the same temperature. Fresh fish are placed in a 32° room, 7x6 ft. in size.

The cheese room is maintained at 40°, and is 11x9 ft. Butter is preserved in a room measuring 13x9 ft., whose temperature is maintained at 60°.

(Concluded on Page 2, Column 1)

MACMARR CHAIN MERGES
WITH SAFEWAY SYSTEM

NEW YORK CITY—Announcement of the immediate consolidation of the MacMarr chain group with the Safeway system makes the latter the second largest grocery chain in the country, according to the American Institute of Food Distribution, Inc.

The competitive grocery situation on the Pacific Coast, the Mountain States, and through most of the southern part of the area west of the Mississippi will be altered by the transfer of the MacMarr interests.

Safeway will now have under operation something over a total of 4,000 grocery stores, of which nearly 2,200 have meat markets. All of the stores, with the exception of the 429 sanitary markets around Washington, Baltimore and Richmond, are located west of the Mississippi.

RAY-MALING CO. ANNOUNCES
PRODUCTION SCHEDULE

PORTLAND, Ore.—The Ray-Maling Co. of Hillsboro, Ore., will quick-freeze 600 tons of peas, 300 tons of whole-kernel yellow bantam corn, 300 tons of spinach, 150 tons of Cuthbert raspberries, 91 tons of Montmorency cherries, 91 tons of Marshall strawberries and 25 tons of Bing cherries for Frosted Foods, Inc., and Pacific Frosted Foods, Inc., two marketing subsidiaries of General Foods, Inc., according to an announcement made by officials of the Birdseye Packing Co.

LOS ANGELES FIRM NAMED
McCRAE DISTRIBUTOR

LOS ANGELES, Calif.—W. H. Smith & Co., has been appointed distributor for the McCrae Refrigerator Sales Corp. in Southern California.

IMPORTANT ANNOUNCEMENT

NEWS! The Refrigerated Food Section of ELECTRIC REFRIGERATION NEWS will become a separate publication on September 1, 1931.

Foreseeing an array of important developments in the field of food refrigeration—in the production, packaging, transportation, distribution, storage, and display of all classes of refrigerated foods—REFRIGERATED FOOD NEWS will cover the entire field and grow with this newly-defined industry.

Vast potentialities in the realm of refrigerated foods are indicated by the innovations already made, and by those which are looming up on the horizon of the future. Whatever the trend of these developments, whatever direction they may take, REFRIGERATED FOOD NEWS intends to be on the job, reporting impartially and accurately facts and opinions pertaining to the progress of this new art.

This issue of ELECTRIC REFRIGERATION NEWS is the last which will contain a Refrigerated Food Section. Begun in March, 1930, this section has brought news of commercial applications of refrigeration to the preservation of food.

Pursuing this policy, REFRIGERATED FOOD NEWS will present editorially the news and problems of the producers and merchandisers of meats, fish, fruits, vegetables, pastries, ice cream, confections, dairy products, and all food products which need refrigeration.

The field is enlarging. The need for a medium of news and interpretation is vital. REFRIGERATED FOOD NEWS will serve the field and answer the need.

Food Distributors
Open Meeting
August 18

NEW YORK CITY—Plans are nearing completion for the fourth annual convention of the National Food Distributors' Association, to be held in the McAlpin Hotel here August 18, 19 and 20. Requests for space indicate that this year will see the largest exhibition of foods in the history of these meetings, according to association officials.

Adam Muller, chairman of the convention committee, will open the sessions Tuesday morning, August 18, after which Henry Blumers, president of the Greater New York Cheese Dealers Association will speak.

The talk will be followed by an address of welcome by Mayor "Jimmy" Walker of New York City, and a response by L. J. Schumaker, president of the association. A business meeting will occupy the afternoon.

Wednesday morning will find the members in a closed session. Talks will be given by E. W. Rosenheim and H. H. Blauvelt, vice presidents, and C. H. Behle, chairman of the board. Round-table discussions will follow each talk.

The afternoon will be devoted to inspections of food products in the exhibition hall.

G. B. Collier of Detroit has been appointed chairman for the day on Thursday. The morning session will feature an address by Philip Gott of the Chamber of Commerce of the United States.

Nomination and election of officers for the coming year, and a directors' meeting will close the morning session.

The last afternoon of the convention will be devoted to pleasure trips for lady guests at the sessions.

The women guests will visit the observatory of the Empire State building, and will make a tour of inspection over the North German Lloyd liner Bremen, where tea will be served.

GENERAL FOODS
HAS \$4,595,059
QUARTER PROFITShare Value 87 Cents,
Earnings Report
Shows

NEW YORK—The report of General Foods Corp. and subsidiaries for the second quarter shows net profits of \$4,595,059, after all charges and expenses, equal to 87 cents a share on the 5,256,350 shares of no par value common stock outstanding June 30.

This compares with net profits of \$4,638,952, or 88 cents a share for the corresponding quarter last year when there were 5,284,649 shares outstanding.

Net profits for the first six months totaled \$10,167,458, equivalent to \$1.93 a share, or 43 cents above the \$1.50 dividend requirement for the six months period. For the first six months of 1930 the company earned \$10,629,716 or \$2.01 a share.

"Reports received this month from our district offices," C. M. Chester, Jr., president, says, "reveal a healthier sentiment among the grocery trade in most sections of the country. We find that inventories, both wholesale and retail, are at very low levels and the need for replenishing should stimulate business in the near future."

CONSOLIDATED STATEMENT OF
PROFIT AND LOSS

Second Quarter Ending June 30, 1931
Gross Profits from Operations, \$15,653,890
Selling, Distributing, Administrative and General Expenses and Other Charges, 9,997,821

Provision for Depreciation, 5,656,069
Balance, 615,974
Add Miscellaneous Income, 203,998
Total Income, 5,244,093
Provision for Income Taxes, 649,034

Net Profits, \$4,595,059
Six Months Ending June 30, 1931
Gross Profits from Operations, \$31,754,767
Selling, Distributing, Administrative and General Expenses and Other Charges, 19,408,491

Provision for Depreciation, 12,346,276
Balance, 1,169,806
Add Miscellaneous Income, 396,705
Total Income, 11,573,175
Provision for Income Taxes, 1,405,717

Net Profits, \$10,167,458
*Equals \$1.93 per share on 5,256,350 shares of No Par Common Stock outstanding at June 30, 1931.
In the first six months of 1930, the company as then constituted earned \$10,629,716 on 5,284,649 shares, equivalent to \$2.01 per share.

CREAMERY FINDS FROZEN
FRUITS ARE GOOD SIDELINE

OMAHA, Nebr.—Frozen fruits have proven an excellent sideline for the Fairmont Creamery Co. during the four years that the dairy has handled them, according to a statement of A. L. Rutherford, manager of the department which has done pioneering work in retailing this type of product.

Low handling costs due to the availability of low-temperature refrigeration equipment used for the company's main dairy products and an ever-increasing demand by the housewives, to whom a third of the frozen fruits are sold, are the reasons placed by Mr. Rutherford for the success of the venture.

PACKERS USE POUND CUP
FOR COLD PACKS

SALEM, Ore.—A new one-pound cup for cold pack fruits is being distributed by the Hunt Brothers Packing Co., of Salem, Ore. The brand will be known as "Supreme Quality" and pictures of various fruits are printed on the cup. It is also planned to market the cups to other producers who wish to use them in their own lines.

The Cool Way to a Warm Man's Heart



Gentlemen prefer blondes—especially in sweltering dog days—when they bring cooling, refreshing drinks
A comprehensive collection of recipes for cold beverages appears on page 8 of this section.

REFRIGERATION EXHIBITS AT GROCERS' MEETING



DETROIT FOOD STORE HAS UNIQUE LAYOUT

(Concluded from Page 1, Column 1)

perature is 38°. The walk-in meat cooler on the main floor is held at a temperature of 32° to 35°. Fresh fruits and vegetables are kept at a 40° mark.

Rooms for storing frozen fruits, vegetables, and meats are insulated with six inches of cork. The remaining vaults are lined with four inches of cork. The Detroit branch of L. Mundet and Son, Inc., did the insulating work.

In addition to refrigerating equipment already listed, a large vegetable cooler will be placed on the second floor, cooled by a Frigidaire commercial compressor, model W5-100. A Frigidaire water cooler and fountain has been placed on the main floor.

Quick-frozen foods are wholesaled to some of Detroit's large restaurants and hotels. At present, no plans have been made for a retail trade in the products.

All frozen foods are purchased through Detroit food brokers. Strawberries and peaches frozen by the MacIntosh organization of Buffalo are sold by the store, as are frozen peas and spinach packed by A. C. Hemingway & Co. of Syracuse. Frozen cherries, obtained from the Detroit Refrigerating Co., are also sold.

The first floor of the food store is given over entirely to personal retail sales. The room is 85 ft. deep and is of about the same width. The main entrance is on the west side of the store, there being a side entrance on the north.

Running the full length of the north and south walls are shelves supplied by



Among the manufacturers' exhibits at the annual convention of the National Association of Retail Grocers, held recently in Milwaukee, were displays of refrigeration equipment by the General Refrigeration Co. of Beloit (upper left), the Grand Rapids Cabinet Co. (upper right), and the Grand Rapids Store Equipment Co. (lower).

the Detroit Showcase Co. They are about seven ft. in height. Sloping glass showcases, supplied by the same firm, with foundations of Verdi marble and trimmings of walnut wood and Monel metal run parallel to the wall shelves, the entire length of the room.

The south shelves and cases are stocked with jams, jellies, olives, pickles, canned meats, sauces, relishes, tea, coffee, canned fruits and vegetables, and bottled ades, ales and punches.

The cases serve as companion agents to the shelves, and display attractively items selected from the rows behind them, bringing the products to the customer.

The north shelves and cases hold tobaccos, bakery goods from the store's own basement bakery, foods from the firm's delicatessen—also in the basement—and a line of dairy products.

Standing in the store at a front-and-

center position is a rectangular counter island measuring 60 ft. around. It contains candies, and fancy biscuits and wafers.

Twin U-shaped counters, 55 ft. each in length, with Monel metal, outward-dipping tops display the stock of fresh vegetables and fruit. Beneath them, covered by glass, are the same products in fancy preserved condition—beneath the fresh cherries are displayed boxes of candied cherries, etc.

At the back of the store—the east—is the meat department, shaped as a large D against the walk-in cooler. The management does not make extensive use of display islands. Three are located between the two doors at the front of the building, and three between the candy and vegetable departments in the center of the store.

No stock is price-tagged except that on the display islands. Stocks on these

tables is changed frequently, and no table is limited to any particular type of merchandise.

Thirty-two salespersons are stationed in the main room. All offices are on the mezzanine floor, overlooking the salesroom.

On the second floor is the retail order room, the telephone switchboard room, and employees' rest and locker rooms. Eight persons are employed to take orders.

Having been filled, order supplies are packed in cases, and sent down to the first floor by a metal chute, from where they are delivered by the company's fleet of 16 trucks.

Electric dumb waiters carry merchandise up or down for re-stocking purposes in any department.

The third floor is given over to storage of stock, and quarters for filling wholesale orders.

"Z" PROCESS USED ON FISHING STEAMER

LIVERPOOL, Eng.—On the waters of the Atlantic ocean near Greenland, the first fishing boat equipped with the "Z" process quick-freezing plant, manufactured by M. T. Zarotschenzeff and Liverpool Refrigeration Co., Ltd., is operating.

This vessel, the S. S. Lesseps, is fully equipped with quick-freezing equipment and the fish, mainly halibut, are frozen in one-half, one, two, and three-lb. cartons as soon as they are caught. The Lesseps is owned by a Norwegian group, A/S Jangaards Havfiskeelskap of Aalesund.

The quick-freezing equipment consists of one specially arranged cabinet having a capacity of one to one and one-half tons of carton fish per day.

Cartons in which fresh fish are packed are practically air and watertight and the products are wrapped in cellophane. After the cartons are frozen, they are packed into cardboard containers, sealed and stored.

The ship will put into port in England late in August and the large containers will be shipped to retailers throughout England without being repacked. Through tests it has been discovered that frozen fish can be shipped without artificial refrigeration.

In the tests, it was found that a container filled with quick-frozen products at a temperature between 5 and 10 degrees and shipped for 12 to 16 hours on a train with the outside temperature of 70 degrees arrived without signs of thawing.

LARKIN

100% VERTICAL SURFACE

COILS

Protected by
U. S. Patent
No. 1,776,235

GROWING TREMENDOUSLY IN DEMAND - - THAT IS WHY OUR PLANTS ARE RUNNING DAY AND NIGHT!

...

Better Performance - - Lower Cost The Reason For Increased Demand

LARKIN 100% Vertical Surface Aluminum Plate COILS are continually growing in popularity and demand. Many manufacturers, some of whom are shown here, have adopted Larkin Coils as Standard Factory Equipment. Distributors and dealers pronounce them real sales, performance and service assets. Users find them best because Larkin Coils eliminate dehydration and defrosting problems. They are so efficient that the costly problem of servicing becomes a negligible factor. Larkin Coils are made in 93 standard sizes—every commercial need covered.

Complete Data Sent on Request

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Originators and Manufacturers

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Standard
Factory Equipment
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DEPENDABLE REFRIGERATION
DETROIT, MICH.

UNIVERSAL
DETROIT, MICH.

TRUPAR
DAYTON, OHIO

SERVEL
Electric Refrigeration

ICEOMATIC
BLOOMINGTON, ILLINOIS

B-K, Junior
New Brunswick, N.J.

Zerozone
Lifetime Refrigeration

Standard
Factory Equipment
with—

Obsopure
DETROIT, MICH.

KULAIR
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**Electric-Automatic
REFRIGERATOR**
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**ELECTRIC
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REFRIGERATION

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DETROIT FIRM PLANS FROZEN FRUIT SALES

By Elston D. Herron

DETROIT—It is toward two objectives that officials of Sterling, Wilson, Hamblen Co., Inc., are pointing as the eve of another fall-and-winter selling season nears—increased sales volume for their newest product, quick-frozen fruits, and development of greater efficiency in their system of auto-truck food distribution.

Although the concern, with 6,000 dealers throughout the state of Michigan, entered the quick-frozen fruit business only six months ago, W. A. Sterling, president, says that it will endeavor to distribute 1,000,000 pounds of the products this season.

Organized in 1868, the company's sole business was the wholesaling of oysters until two years ago, when General Seafoods, Inc., arranged for the merchandising of quick-frozen fish through Sterling, Wilson, Hamblen Co., Inc. These products, however, are sold under the Sterling label.

Seek More Fish Sales

Approximately 500,000 pounds of frozen fish are sold each season, Mr. Sterling says, and efforts are being made through various advertising media to increase this volume.

Mr. Sterling states that the auto-truck food distribution has as its purpose the elimination of the order-taking drummer, supplying the dealer with stock quickly, while at the same time maintaining personal contacts with him.

The company secures its supply of fruits chiefly from Oregon, receiving them after they have been quick-frozen near the fields. The supply of frozen cherries comes from Traverse City, Mich., where they are purchased from the Fruit Growers' Union.

When these frozen fruits reach Detroit, they are placed, as are the oysters and fish, in cold storage in railway terminal buildings. It is from these rooms that the company's fleet of 25 iced trucks is stocked and sent on its visits to the firm's 6,000 outlets.

One-third of the truck fleet uses ordinary ice, while the others use solid carbon dioxide equipment. All of the trucks are small, which enables them to hold below-zero temperatures consistently, in spite of constant opening of their doors.

The trucks cover a radius of 150 miles, and visit each dealer every other day. All dealers more than 150 miles from Detroit are supplied from storage depots used by the concern to eliminate profitless long-distance trucking trips. All trucks have routes so arranged that at no time will they retrace their route in returning to Detroit.

No dealer is urged to take a larger supply of frozen fruits or fish than he actually believes he can sell in two days. Most of the dealers use refrigerated cases. Drivers are trained to inspect the stock on hand at each store, and suggest additions to the proprietor.

Believe in Advertising

Sterling, Wilson, Hamblen officials are firm believers in advertising. Recently they conducted a campaign to promote the sale of their frozen fish by using radio broadcasts, billboard advertising, and dealer window displays.

At the opening and closing of each daily broadcast, there were sounded four notes from an imported French horn.

When the public had been given due opportunity to associate the sound of these notes with Sterling broadcasts and Sterling products, each of the company's fleet of trucks was equipped with one of the horns, to be blown in the streets of each town where Sterling dealers were located.

Mr. Sterling says that this scheme was successful in tying together the various forms of advertising into one coherent drive to focus the attention of customers on Sterling products. In addition, each wrapper for the company's products has been stamped with the four notes of the Sterling horn theme song.

The company is planning to move its offices from the northwestern part of Detroit to quarters near the railway terminal, to provide more office space and facilitate communication with the storage houses.

Forty persons are employed by the company. The officers are: W. A. Sterling, president; F. C. Sterling, vice president, and R. R. Hamblen, secretary-treasurer.

KROGER STORES APPEAR AS CHICAGO CHAIN

CHICAGO—The name of "Kroger" became publicly identified with the group of stores in Chicago which the Kroger Grocery and Baking Co. has been operating since December, 1928, when, on July 11, the chain of stores formerly known as Consumers Sanitary Coffee and Butter Stores was re-named the Kroger-Consumer Stores.

The Kroger-Consumer chain operates 339 stores in the Chicago district.

What do you mean by "INSULATION EFFICIENCY?"

Here's an honest definition which includes
the most important factors

1. LOW CONDUCTIVITY

Insulation should have a low coefficient of thermal conductivity. For Armstrong's Type LK Corkboard, the figure is .263 B.t.u. per square foot, per inch thickness, per degree Fahrenheit temperature difference, per hour, at 60° Fahrenheit mean temperature.

2. LOW MOISTURE ABSORPTION

The material must be highly resistant to moisture or its efficiency may be wrecked in short order. Cork permanently resists the attacks of moisture. Thus the life of the insulated equipment is increased by the use of Armstrong's Type LK Corkboard.

3. STRENGTH AND RIGIDITY

The insulation in a cabinet must serve without settling, warping, or shrinking. Armstrong's Type LK Corkboard is a rigid board. Less framing material is required, thus increasing over-all efficiency. It cannot settle from vibration, or warp or shrink in service.

4. LIGHT WEIGHT

Insulation must not add unnecessary weight to the walls of the cabinet. The new Type LK Corkboard is exceptionally light in weight. This reduces shipping expense for all units and lightens the dead load of all mobile units, such as refrigerated trucks.

5. PERMANENT PERFORMANCE

There is no question about cork's performance. A record of thirty years' service in the refrigeration industry guarantees its lasting efficiency. Properly installed, corkboard does not deteriorate.

ANY Armstrong branch office will be glad to furnish you additional data about Armstrong's Type LK Corkboard, supply samples for test, and cooperate in supplying specific recommendations for the installation of this efficient insulation in your equipment. Or write direct to Armstrong Cork & Insulation Co., 917 Concord St., Lancaster, Penna.

Armstrong's

Product

AT YOUR SERVICE

Twenty-eight Armstrong Cork & Insulation Company branches at the following cities are ready to serve you. See Telephone Directory for street address of the branch office nearest you.

Albany, N. Y.; Atlanta, Ga.; Birmingham, Ala.; Boston, Mass.; Buffalo, N. Y.; Charlotte, N. C.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Tex.; Denver, Colo.; Detroit, Mich.; Grand Rapids, Mich.; Houston, Tex.; Jacksonville, Fla.; Kansas City, Mo.; Memphis, Tenn.; Milwaukee, Wis.; Minneapolis, Minn.; New York, N. Y.; Omaha, Neb.; Pittsburgh, Pa.; Rochester, N. Y.; St. Louis, Mo.; Syracuse, N. Y.; and in Canada—Montreal, Toronto, Winnipeg.

Armstrong representatives are located in the following cities: Baltimore, Md., John R. Livezey; Los Angeles, Cal., Gay Engineering Corporation; New Orleans, La., H. T. Steffer; Philadelphia, Pa., John R. Livezey; Spokane, Wash., D. E. Fryer & Company; Portland, Ore., Gillen-Cole Company; San Francisco, Cal., Van Fleet-Freer Company; Seattle, Wash., D. E. Fryer & Company; Washington, D. C., John R. Livezey.

Armstrong's ^{TYPE} LK Corkboard Insulation
Efficient and Practical Insulation for Refrigerating Equipment

REFRIGERATED FOOD SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published by

BUSINESS NEWS PUBLISHING CO.

550 Maccabees Building, Woodward Ave. and Putnam St.
Detroit, Michigan. Telephones: Columbia 4242-4243-4244

NOTE: This section will be discontinued as Part II of Electric Refrigeration News with this issue. Refrigerated Food News will be issued monthly as a separate publication, beginning September 1, 1931.

Subscription rates for the new Refrigerated Food News: United States and Possessions and all countries in the Pan American Postal Union: \$1.00 per year; three years for \$2.50. All other countries: \$1.50 per year; three years for \$3.50.

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VOL. 5, No. 24, SERIAL No. 126, Part 2, JULY 29, 1931

The Container and Contents

SIXTEEN months ago the first *Refrigerated Food Section* of the NEWS was issued. This will be its last appearance as a section, but beginning September 1, REFRIGERATED FOOD NEWS will appear monthly as a separate publication. Thus another important step will be taken in the development of a service which, we believe, will prove highly valuable to two important industries—refrigeration and food.

The new publication will continue and expand the service of the *Refrigerated Food Section*. Out of the great mass of ideas and events of interest to these two fields, REFRIGERATED FOOD NEWS will select material of mutual interest. It will emphasize the inherent relationship between refrigeration and food, between the container and the contents.

The new publication will bring to the refrigeration industry an intimate picture of the detailed problems of its most important customers—the producers, purveyors and consumers of food. To food selling and food service establishments the paper will present the latest development in refrigeration and the profitable methods of using it.

The Major Issue

Today refrigeration represents the greatest single opportunity for progress in the production, transportation, distribution, and preparation of food. The trend of events indicates that the application of refrigeration will soon become the major issue affecting the future of everyone concerned with the handling of perishable food.

Future developments will undoubtedly be as phenomenal and far-reaching in their effect upon the lives and habits of people as was the introduction of cold storage. No one in the food industries can ignore these developments without jeopardizing his business.

Five years ago, in September, ELECTRIC REFRIGERATION NEWS was launched. It focused attention upon the mutuality of interest between the electrical and the refrigeration industries. To each group it brought the viewpoint and the problems of the other. To each it interpreted the opportunities for profit through coordinated effort. One industry produced the equipment and the other provided the service which made the unit operative. Both had much to gain by working together.

The Connecting Link

Likewise, REFRIGERATED FOOD NEWS will point out the opportunities for joint effort between the refrigeration and the food industries. It will serve as a connecting link between those who provide the service of refrigeration and those who sell the food which is protected by the equipment.

Refrigeration men have much to offer the food men. They can open the gates to rich new fields for food men to cultivate. They can make possible a host of new and better foods for the public.

The food producers and dealers represent a tremendous market for the application of refrigeration. This market can be served intelligently and profitably only through increased knowledge about food. The future profits of each industry are bound up together.

Profits in Prospect

IT IS reported that two of the largest chain store organizations in the country are actively negotiating with manufacturers for the latest type of refrigeration equipment for installation in all of their retail stores. It is understood that the specifications for display cases require that the construction is suitable for low-temperature operation.

These contracts, if they materialize, will run into millions of dollars. One of the largest financial service companies in the country is watching this development closely in order to inform investors regarding potential profits and to evaluate the leadership among low-temperature equipment producers.

For most of the manufacturers the development of low-temperature display cases has, so far, been mainly an expense. One design after another has been submitted, tested and returned for further improvement. The continued piling up of cost, with comparatively little return, has been somewhat discouraging, but none want to lose out in the race for the tremendous volume of business which quick-frozen food holds in store.

It has been our guess that the big impetus to quick-frozen food will come from a chain store organization. The highly competitive conditions in the food retailing field put a premium on any new means of giving the public better service. If a way can be found to accomplish that objective and at the same time reduce waste and cost of handling, it will mean an "edge" over competition.

Once a national chain makes the break it is quite likely to precipitate a wild scramble to get aboard the bandwagon.

The time is propitious. The answer to depression conditions lies in new products, new materials, new thinking all along the line. There is every reason to believe that quick-frozen food will be one of the new things from which the next great cycle of prosperity will be built.

On Our Bookshelves

"CHAIN STORES"

Author: Paul H. Nystrom. Publisher: Domestic Distribution Dept., Chamber of Commerce of the United States, Washington, D. C. Publication date: 1930. Pages: 46, containing comparative tables. Price: \$1.00.

This little book was published for the people who aren't just sure what all this chain store talk is about. So very much has been written, and so very much more has been said about chain stores, yet it is often the case that the average citizen doesn't understand what chain stores really are, how they are organized, whether they were started for profit or merely to close the doors of the independent man, and how they actually stack up with independent retail establishments.

These persons who are so much in the darkness should spend an hour over Professor Nystrom's comprehensive, yet simple, digest of the situation. Briefly it describes the chain store's beginning, its growth, its problems, and its operation, and even has a word for its future.

And there are some fine little tips, too, for the independent retailer who would like to see his business pick up in spite of his neighboring chain store competitor.

Professor Nystrom says that actually the average cost of doing business in chain stores is but little less than in independent stores, considering that most of the latter grant credit, make deliveries, handle wider varieties of goods, and often keep open longer hours than chain stores. In other words, the public gets just what it pays for.

Seven factors, says the writer, are usually responsible for chain store success. Chain stores always try to secure convenient locations, attractive buildings, attention-getting displays and effective advertising media, efficient employees, specialization in goods and services, detailed accounting systems, and scientific buying methods.

As for the future of the chains, Professor Nystrom says that they are certain to increase and grow as long as the average managing ability of independent store managers is high. Yet he says that chains will eventually, as is the case in several instances now, reach a saturation point as far as expansion of units is concerned, and will then concentrate on sales per store.

"The future of the independent retailer who uses the means of good management is assured against the chain store movement."

GLEANINGS FROM RECENT PERIODICALS

BEING the ideal package for the new quick-frozen fruits and juices the paper carton is heading for new heights in production activity and having been found to afford economical utilization in the dairy industry for milk distribution it is quite likely that before long it may constitute a distinct threat to bottle makers. Report on the business of American Sealcone Corp. shows that in the first six months of this year 20,000,000 Sealcones were turned out, compared with 18,139,000 for the entire year 1930. Company has closed another deal, with Summe Dairy Co., of Kansas City, Mo., whereby its containers will be used exclusively for individual milk distribution.—*The Facts in Food Distribution*.

An Editor on Wheels

Stories of Interesting PLACES in the Refrigeration Industry

By GEORGE F. TAUBENECK

Romance

Grace Hegger Lewis, former wife of Nobel-prize-winner, Sinclair Lewis, has written a novel about young married love which many believe to be an autobiographical story of her own connubial life with the author of "Main Street."

One of the delightful features of the life of the unconventional young couple in Mrs. Lewis' story was their love of travel and the frequency with which they were enabled to pull stakes and point their feet toward the Unknown.

"Tee-rains, travelin'" was the eager cry of this itinerant pair. And so long as they could continue to travel, romance hovered about them and they were gloriously happy together.

When they settled down in one spot for any length of time, they fidgeted and quarreled and suffered the pangs of maladjustment. To them, romance was synonymous with travel.

Although there are any number of people who are never happy away from their own hearths, few will deny that the linking of travel with romance in the lives of Mrs. Lewis' couple was only an exaggeration of an emotion we all feel at some time or other.

That old question, "What would you do if you were suddenly given a million dollars?" almost invariably elicits the answer, "Well, first of all I'd travel a bit and see the world..."

Honeymoons, which are generally accepted as the acme of romance, are nearly always trips.

It hasn't been so long ago since railroading was fraught with romance.

Today the skyways are attracting the same adventurous youths who would have been "wur-r-kin" for the railroad a few decades back.

And if you take a couple of good looks at a bus driver, you will find that he belongs to a very special breed of men, and that with others of his tribe he feels a sense of camaraderie comparable to that said to exist amongst members of the picturesque French Foreign Legion.

Bus Travel

Your typical bus driver is both a philosopher and lowbrow. He must be a paradoxical hybrid of this nature, or he would be at sword's points with his job.

In the first place, he must put up with yowling infants. He must answer the same questions hour after hour, day after day. He must be affable with garrulous old women and querulous old men.

He must be able to pack four unemployed negroes, three Southerners, two Polish laborers who can't speak English, one genteel lady of some sixty summers, five long-suffering mothers with a total of thirteen ill-assorted and petulant offsprings, one sailor on leave, one school teacher on vacation, two honeymooning couples, and six traveling salesmen into a bus designed to accommodate 32—and make them like it.

That's why he is a philosopher.

He is a lowbrow because he likes his job, and because he fits it.

His uniform, the wayfaring nature of his duties, and his gay fraternal spirit usually make him quite a hero with waitresses at each of the half dozen or more hasheries at which the bus stops en route.

From his standpoint, it's not a bad job at all—something like a sailor's, except that he calls at every port every night.

As we have suggested above, you can't be too squeamish about your associates if you want to travel by bus.

You must expect to be thrown (literally) into intimate and often violent contact with an odd lot such as the one described.

You must expect to hear the mother on your left tell all about the cute things Margie did at the age of three, and you must be able to withstand an hour of pronouncements on the situation in general by the ladies-ready-to-wear salesman who is sitting with you.

You must not be dismayed at the

bickerings of the Poles, at the cooing of the honeymooners, or at the Lothario movements of the sailor toward the school teacher.

Sometimes bus travel can't be avoided. It's the only way to get to your destination, or possibly the use of a bus may save several hours over a train schedule.

But don't be too sure your bus will arrive at the indicated hour. Often they are on time; but not infrequently they will pull in from one to six hours late.

Outside of the irregular schedules, the difficulty of reading, and the intimacy of contact (which anybody who likes to study raw humanity will enjoy occasionally) that seem inescapable in bus travel, there are some things to recommend it.

In the summer, bus travel is cooler and sometimes more comfortable than train riding.

One is closer to the landscape, and has a better opportunity to observe it.

Frequently some of the bus occupants are unwittingly amusing. And their habits are often worthy of study.

During the twilight hours bus travel can be genuinely exhilarating, just as is motoring at the same magic time.

And, of course, bus travel costs less than any other form of hired locomotion.

Train Travel

One of the genuine pleasures created by this modern world-in-high-gear is that of boarding a train in early evening, eating a good meal on a diner, repairing to the club car with a brace of cigars, enjoying a leisurely perusal of current magazines, and perchance striking up an acquaintance with one of the very interesting men sure to be found in club cars of all-Pullman trains.

One must search far to discover better or quicker service than is offered by the dining car on a good train. And surely digestion is aided and abetted by the peaceful, relaxed, dilatory manner in which the meal is usually eaten.

Not so attractive is the bed for which one pays. Dressing in an upper berth is, of course, an old joke. There are those who argue, and with reason, that an upper berth is more comfortable than a lower. Neither, however, provides a very satisfactory sleep—especially if one is tall.

At first the monotonous clickety-click-click of wheels on rails can be soothing and sleep-inducing, just as is the patter of rain on a tin roof.

But eventually there comes the grinding stop, voices outside, the whistle, the rush and the shower of cinders of a passing train, the lurches—backward and forward, and the sudden start.

Then, just after you are all composed again and snoozing away, the disconcerting process is repeated.

Worst of all is the positively indecent hour at which one is rudely awakened by a negro porter, who pulls and tugs at the sheets in which the traveler is encased until the victim is thoroughly aroused—and thoroughly incensed.

A great majority of overnight trains seem to arrive between seven and eight o'clock in the morning, which means that the porter hauls everybody out around six o'clock so he can have all his berths made up by the time the train pulls into the station.

And have you ever tried to shave in a careening Pullman washroom, while thirteen other grouchy men bumped you from all sides as they fumbled through their morning ablutions?

Here we started to talk about the romance of travel, and have spent most of our time yipping about the annoyances and inconveniences.

We might shift the scene and paint the joys of being yourself and dropping the mask of politeness and the veneer of civilized regard for one's fellow beings, which becomes possible on trains. We might talk about the unadulterated joys of reading, which train journeys offer so enticingly.

But we're going to go right on being moody, and attempt to destroy whatever fond illusions you may have about air voyages.

Air Travel

Riding in commercial route airplanes is perhaps as tedious a method of travel as we have ever experienced.

It's fun going up, and it's fun coming (Concluded on Page 5, Column 2)

NEW CAFE FEATURES ELECTRIC EQUIPMENT

SAN FRANCISCO—Electric refrigeration, along with other automatic equipment, is employed in Wyrick's Movie-teria Cafe, recently opened at 1063 Market St. here, to satisfy appetites economically and automatically.

All refrigeration equipment operating in the new cafe was installed by Cochran & St. John, Ltd. of San Francisco, manufacturer of Kno-Frost compressors.

A six-cylinder, three hp. compressor operates a methyl chloride multiple system consisting of complete water cooling equipment, together with three large refrigerators in the kitchen.

The water-cooling system consists of a large pressure-type cooling tank located in the basement, with a small centrifugal pump which circulates cold water through insulated pipes to 120 outlets, an ice water faucet being accessible to each stool along the long central counter.

Refrigerators in the kitchen were specially designed for electric refrigeration by Cochran & St. John, with low baffled coil compartments across the top into which are bracketed horizontal 100 per cent vertical surface area cooling coils, which defrost automatically between cycles of the machine.

In the basement of this cafe motive equipment operating several new labor saving devices is used.

An endless conveyor moves 180 bakelite trays behind the plate glass doors of the long central counter, the trays containing a variety of salads, side dishes, desserts, etc.

Dirty dishes are carried back to the kitchen on conveyor belts accessible through sliding panels on each side of the cafe.

Meat orders are relayed through microphones, which are connected to loudspeakers in the kitchen. Hot coffee as well as ice water is available to each patron in unlimited amounts, the coffee faucets alternating with the cold water faucets along the central counter.

Electrical dish washing equipment, mechanical bread mixers, bread cutters and toasters, coffee urns, and sundry other push button and lever devices complete the novel equipment used in the cafe.

An electrically refrigerated ice cream cabinet is operated in the kitchen.

The Movie-teria Cafe is said to be the first installation of its kind in the country. The owner and patentee, R. L. Wyrick, is endeavoring to handle approximately 175 people every 25 minutes with about half the working force customarily required.

FRIGIDAIRE UNIT USED TO COOL MIXTURE IN BAKERY

BRIDGEPORT, Conn.—Water used in the mixing of dough at the Soderholm Baking Co., 453 Maplewood Ave., is being cooled in a C-342 Ebco water tank equipped with a 1½ Frigidaire compressor and four 21X coils, installed by the Downes-Smith Co., Frigidaire dealer.

As flour cannot be mixed properly above a certain temperature, it is necessary to cool the mixing water to counteract summer heat.

The equipment is now cooling an average of 325 gallons per day from 70° to 45°, according to A. F. Becker, manager of the Frigidaire distributor.

Refrigerated Chicks

HAMLIN, Tex.—The Hamlin Hatchery, for the first time in its history, will operate during the summer months this year. In the past it has always shut down during extremely hot weather because the air circulated over the eggs was often too hot for successful incubation.

Webb E. Steadman and J. C. Randal representing the West Texas Utilities Co., in Stamford, recently installed some standard Frigidaire cooling equipment which prevents the temperature inside the incubator rising above 99° F. It operates within a variation of one half of one degree, without observation by the operator.

The equipment installed consists of a compressor, a large coil and a 70 gallon brine tank with a circulating pump forcing cold brine through the incubator. A thermostat control regulates the flow of brine.

SWIFT PLANS TO MARKET CANNED FOODS

CHICAGO—Swift and Co. is expected to open its campaign on the distribution of canned foods before autumn. Salesmen for Swift have been supplied with literature concerning the products, and some orders have been taken for future delivery.

The expansion is being planned as a result of the consent decree decision of Justice Bailey of the Supreme Court of the District of Columbia.

Editor on Wheels

(Concluded from Page 4, Column 5)

down. Occasional magnificent bird's-eye views are to be had—such as that of downtown Chicago and Lake Michigan seen from a Chicago-Detroit or Chicago-Cleveland plane. For a moment or two it is idly amusing to observe the crazy-quilt patchwork of the country below.

But this palls, and the recurring landscape formulae soon becomes wearisome. And after half an hour or so the roar of the motors is a tautophony which is too deafening to be soothing, too arid and humdrum to be thrilling.

(Looking over my shoulder, Engineering Editor Jack Schaefer, remarks that I've never been up during an electrical storm, or I would change my mind about the lack of thrills in air travel). Jack is probably right, as he often is.

Obviously the most recommendable feature of air travel is the speed with which one is transported from hither to yon.

One can start in late afternoon and arrive at the destination before sundown—saving a night ride in a Pullman, enabling one to get a good night's sleep,

and making it possible to see friends or get other recreation before the morning's work.

Or, if coming home, it gives one an extra night at the office or with the family.

On board the plane the passenger is usually quite comfortable. The ride is smooth, and except for the terrific noise of the motors, there is less to disturb one's reading and thinking than exists on train or bus.

All the pilots I've ever seen thought they were Lindberghs.

Strong, silent, moody, taciturn, mysterious, they give the impression of utter aloneness, aloofness. They smoke innumerable cigarettes. Amongst others of their clan, they joke grimly, and wear a facial badge of sophistication.

The flying profession allures dashing, audacious, impetuous young men who, two generations ago, would have run away to sea, and makes of them self-reliant, self-sufficient stalwarts whose composure is as unruffled as that of a

barnyard goose, and whose mien is as icy as well-frosted coils.

They take their profession seriously, and well they should, for with them passengers are entrusting their lives.

Like the bus drivers—but in much more magnificent style—the airplane pilots are worshipped from afar. At airports a collection of idolizing small boys, fluttering teen-age girls, and sentimental middle-aged women is always gathered to watch the Lone Eagles of the commercial sky-paths swoop down, stalk about alone, and then sail away.

Many are the sighs, and longing are the gazes.

Change

Most enduring and most substantiated of all the schools of philosophy thought out by the ancient Greeks is that pronounced by Democritus, the "laughing philosopher" who averred that change is the most important word in any language, that the substance of all things is change, and that change is the ultimate, the essence of eternity.

Physiologists and psychologists declare that the old aphorism, "variety is the spice of life," is one of the most important fundamental principles of good health—especially of the nervous system. This is true, however, only of the primates among animals, and is most true of man.

Travel is the most convenient form of expressing our urge for change, for variety. And that is why everybody but the Editor-on-Wheels—who has been forced this issue to philosophize on travel, rather than report first-hand observations, because he is staying home for a change—is out traveling the highways and byways.

America goes vacationing in summer time, and it is well. Travel is enlightening, even if all it teaches you is that there is no place like home!

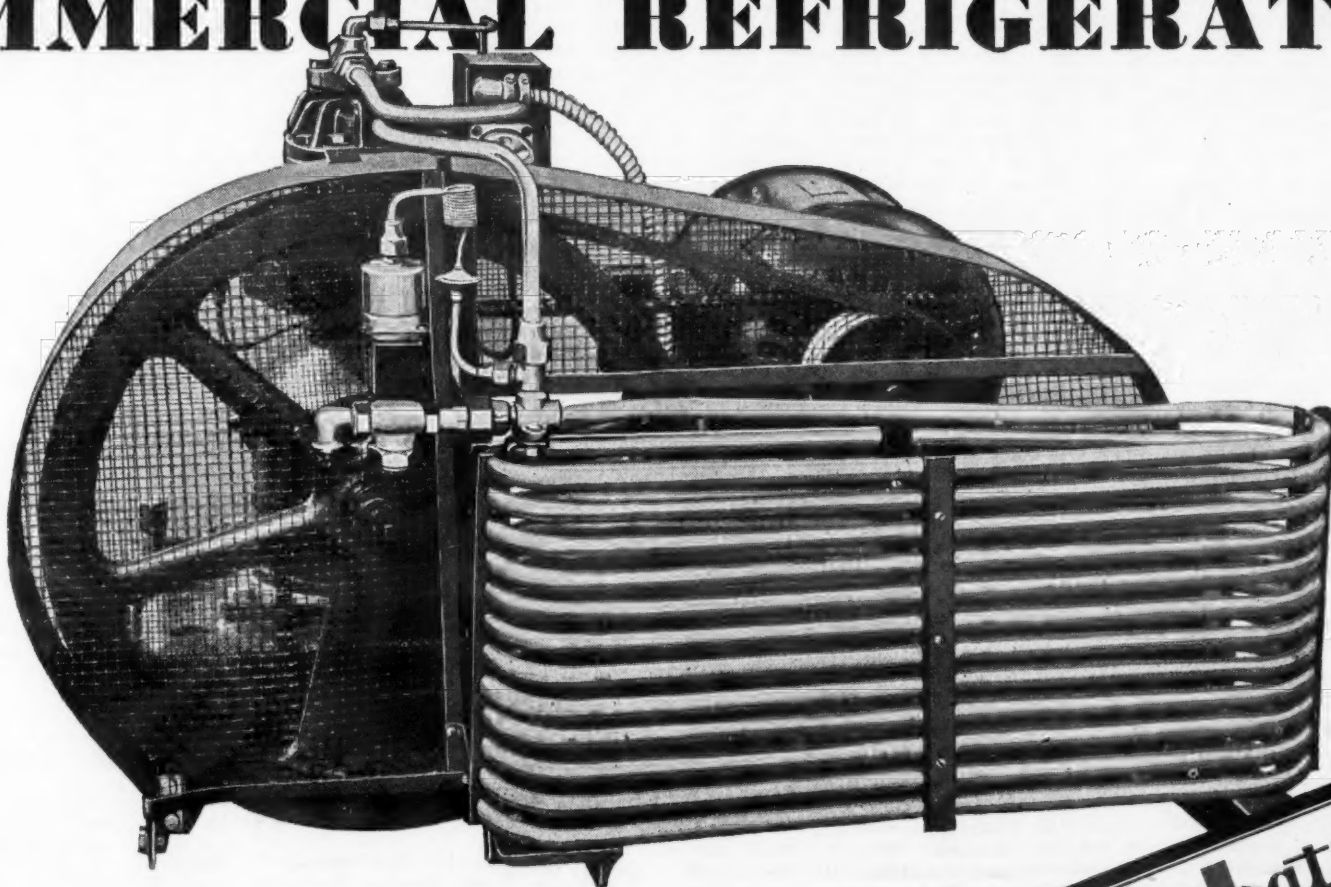
BRIDGEPORT DEALER MAKES TWO INSTALLATIONS

BRIDGEPORT, Conn.—A Kelvinator WR-41 1 hp. water-cooled compressor has been installed in the dairy of Fred Marsh & Sons, Easton, by the Tucker Machine Co., Kelvinator dealer.

The company has also placed a similar compressor, in the Palisade market.

SERVEL

COMMERCIAL REFRIGERATION



■ Here's a long-awaited profit-opportunity for refrigeration dealers—16 improved models to meet every commercial demand

NOW—from one line of advanced machine units—SERVEL Dealers can fill every demand for fractional-ton refrigeration.

Here are 16 improved models—more efficient, more powerful—that SERVEL Dealers can sell at prices no higher than the cost of ordinary equipment.

And because the SERVEL Line embraces a unit for every capacity requirement from 130 to 1510 lbs. of ice equivalent per day, SERVEL Dealers are equipped to sell the exact machine

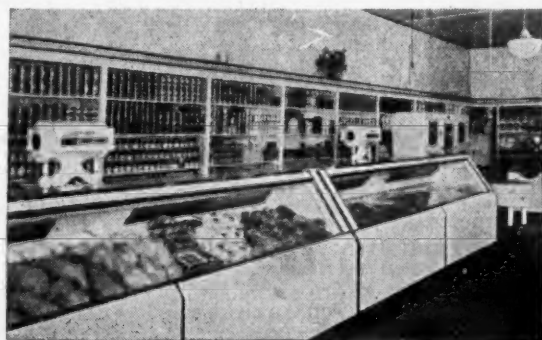
for every installation. No overloading—no wasted capacity—instead, models that precisely fit every need.

Send the coupon for complete details of the Dealer Plan—and a new bonded guarantee that insures your customers against loss.

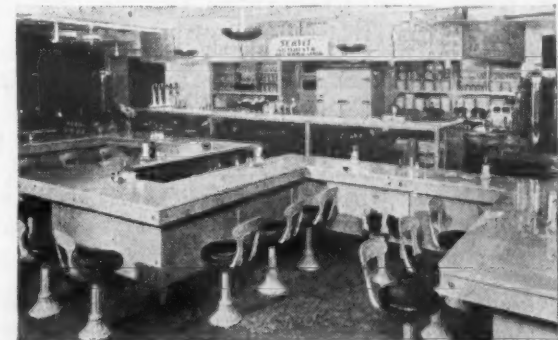
■ NEW-STYLE CONDENSERS: interchangeable; highly efficient. . . .
MULTIPLE VEE-BELT DRIVES: insuring uninterrupted service and quiet operation. . . .
SIMPLIFIED CONTROLS: positive action; fully automatic. . . .
ECONOMICAL OPERATION: low-speed compressors; greater refrigeration for current used. . . .
RUGGED PRECISION CONSTRUCTION: built for long use; compact and accurate. . . .
WIDE RANGE OF 16 MODELS: with capacities of 130 to 1510 lbs. ice equivalent per day.

■ Servel Electric Commercial Refrigeration opens up vast opportunities for sales to such modern groceries and meat markets as the Springfield (Ill.) store pictured below.

■ The perfect control over temperature and humidity provided by Servel Commercial Equipment has won great favor among progressive florists. Below: a typical New York installation.



■ Restaurants, cafeterias, tea-rooms—all of them are turning to Servel for modernized refrigeration. Servel is rendering swift, efficient service in this Milwaukee lunch-room.



SERVEL SALES, INC., Dept. H-5,
Evansville, Indiana.

Gentlemen: Please send me complete information about SERVEL Refrigeration PLUS.

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ADDRESS _____

CITY _____ STATE _____

A PAGE FOR HOME SERVICE WOMEN

ENGINEERS EXPLAIN LOSS DUE TO FROST

By Mrs. P. K. Dunning

WE HAVE heard otherwise good, conscientious housewives laugh merrily about their inability to remember to defrost their electric refrigerators. "My dear," one woman gurgled gaily to us the other day, "I never can seem to get around to defrosting my refrigerator until the freezing unit is so caked over with frost that I can't get the ice cube trays out."

And now that summer is with us, and refrigerators frost up more quickly than during cooler weather, this national indifference to the importance of defrosting has got us to walking around with a drawn, worried look on our face, because we had an opportunity recently to talk with engineers of four of the leading manufacturers of electric refrigerators, and they were unanimous in stressing the importance of defrosting mechanical refrigerators.

"The first quarter of an inch of frost," one engineer told us, "reduces the heat absorbing ability of the freezing coil about 20 per cent. This doesn't mean that each succeeding quarter of an inch has a correspondingly great effect, but it does mean that an accumulation of frost on the freezing coils results in a higher temperature within the refrigerator cabinet."

Besides, the frost is full of odors and flavors absorbed from the various foods in the cabinet, and no good housekeeper should permit too much of it to be present in her refrigerator.

"A coil which is thickly coated with frost," reported another engineer, "is less efficient than one not so coated. This means that it will take more electricity to chill the cabinet and consequently increase the cost of operating the box."

"Esquimaux," quoth a third engineer, "live in ice houses because ice is an insulator and it keeps the cold out and the warmth in. The frost on the freezing coils of an automatic refrigerator works the same way, making it difficult for the heat in the cabinet to penetrate to the cold in the coils and be carried off."

Robbed of Refrigeration

"If women realized that they were robbing themselves of refrigeration by letting frost collect inches deep on the coils of their boxes, I don't think they would be so careless about defrosting them."

"We have been asked," said the fourth engineer, "why we don't make refrigerators so they will defrost automatically. The answer is that we can't make the same unit freeze ice cubes on its inside and melt water off its outside."

If people didn't want ice cubes, automatic defrosting would be a very simple business. As they do want ice cubes, they must take a couple of seconds once in a while to disconnect the motor and defrost the unit."

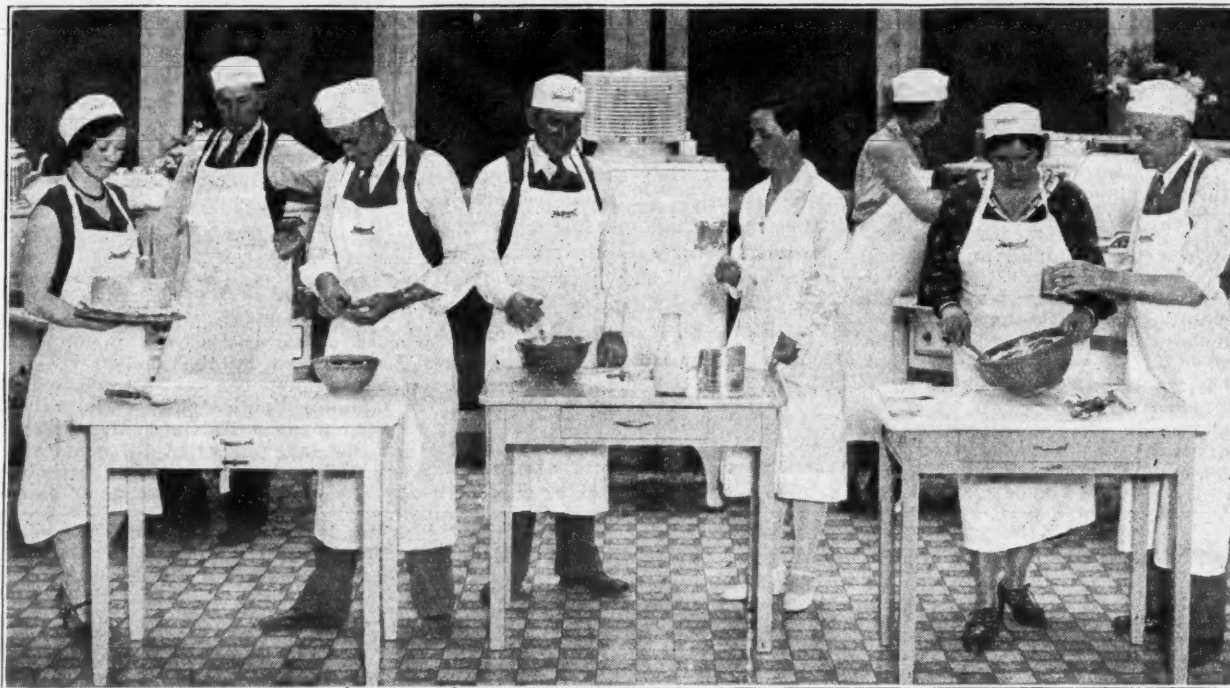
Of course you must have ice cubes, and be able to freeze desserts and salads and things in your refrigerators, so the thing to do is to make up your mind to be as regular about defrosting the unit as we hope you are about cleaning out the inside of the cabinet."

Explains System

In fact, it is a good plan to combine the two operations. Our system is as follows:

Just before going to bed at night we disconnect the motor of our refrigerator, making sure the pan to catch the melting frost is in place. We remove the ice cubes, if there are any, from the unit and place them on one of the food shelves. (We try to run out of ice cubes at defrosting time so it isn't necessary to waste any, but if we have them we let them stay in the box to help keep it properly cold over night). The melting frost will keep the tem-

Dealers Show Housewives How To Cook



Southern California electrists and dealers demonstrate in Los Angeles cooking school.

Foxes Go Modern

OSKALOOSA, Ia.—Even the sly fox has gone modern in his demand for present day conveniences, as is evidenced by the method of food preservation employed by the Silver Black Fox Ranch, Inc., of this city. Electric refrigeration protects the storage of meats and other foods used in the delicate preparation of nourishment for the foxes, which are housed in 50 pens on the spacious premises of this well known ranch.

Refrigeration equipment consists of one 50C model Servel compressor, Larkin chilling unit, and solid corkboard storage room, in which a constant temperature of 36° to 40° F., is maintained.

KENTUCKY BAKERY USES FROZEN FRUIT PRODUCTS

LOUISVILLE, Ky.—Hellmueller Baking Co., one of the largest pie bakeries in this section, uses frozen small fruits in preference to the fresh ones.

"The frozen fruit is more economical and looks and tastes better in the pies," according to Joe Hellmueller.

"It retains its color, flavor, and shape much better after cooking than the freshly pulled berries and cherries."

The baking company buys these fruits in barrels, the cherries from the Washington Cherry Growers Association, Sumner, Wash., and the blackberries and strawberries from either the Goodwin Preserving Co., or the Von Allmen Preserving Co., Louisville.

The price is practically the same as that paid for fresh fruits, and by using the frozen ones, such fruit pies are not confined to one season but can be made the year round.

This is also a more economical procedure for the baker, as there is a saving both the fuel and labor.

perature of the box safely low during the night when the doors are not being opened and nothing is being put into the cabinet.

In the morning the cabinet is wiped out with a damp cloth, the trays rinsed out and filled with fresh water and replaced in the freezing unit, and the motor reconnected.

Dealers Demonstrate In California School

LOS ANGELES, Calif.—Long Beach housewives were treated to a one-day cooking school recently as guests of the California Electrists and the Long Beach Merchant-Dealer Association, with several electrists and dealers in the role of cooking demonstrators.

A number of Long Beach firms lent the necessary equipment for the model kitchen used in the demonstration, which came as a climax to a two-weeks' cooking instruction course for dealers and salesmen, held under the auspices of the Association, the Southern California Edison Co., and the Hotpoint division of the General Electric, with Mrs. Ethel Goodin, Hotpoint home economist, as instructor.

The kitchen was complete in every detail, from the small electrical appliance to the household refrigerator, and each electrical unit in the kitchen figured in the demonstration.

Cooking school enthusiasts in the photograph are—left to right—Catherine Lossing; R. A. Antle; L. O. Wetzel, president, Long Beach Electrists; F. J. Connolly, president, California Electrists; Mrs. Ethel Goodin, Hotpoint economist; Mrs. Ella Wetzel; Margaret Houser and A. F. Boylan.

'PLAN AHEAD,' ECONOMIST TELLS WEEK-END HOSTESS

By Marion F. Sawyer
Kelvinator Home Economics Dept.

ARE you one of those fortunate persons who spends her summers in the country or on the shore; at a camp in the mountains or in a pleasant suburb well removed from the heat and turmoil of the city?

If so, you have doubtless begun already to issue week-end invitations to some of your less fortunate friends whose work ties them in town for the greater part of the week.

Every hostess knows that guests who have spent most of the day on the golf course or the tennis courts will have good healthy appetites. Meals are most important indeed at a gathering of this sort.

And in addition to the conventional three meals a day, provision must be made for "snacks" at odd hours, early morning breakfast for the early risers, midnight suppers for the night owls, and cooling beverages "on tap" all the day through.

But how, you may ask, can a week-end hostess without servants (as most of us are), run a "restaurant" of this sort, and still have any time to spend with her guests?

The answer is simple, the wise hostess plans her meals for the entire week-end long before the guests arrive, does all her marketing well ahead of time, and has many of the dishes prepared and stored in her electric refrigerator before she sets out in the station wagon to collect her guests.

Included in her market order has been a liberal supply of cold meats and various cheeses, which are to be stored on one shelf of her electric refrigerator, especially for those hungry guests who cannot wait for the dinner bell, or who experience hunger pangs just before retiring.

Also included is a goodly number of oranges, lemons and ginger ale for cooling drinks. These drinks should be made up in concentrated form ahead of time.

'All You Can Eat'

NEW YORK CITY—The "all you can eat for 60 cents" idea has been inaugurated in several of the Childs Co.'s restaurants of this city and so far the plan has met with marked success.

The innovation was made with a view to ascertaining public taste as well as to stimulate sales, but the results soon proved the value of the plan and it was extended to dinners priced at 75 cents and \$1.

The Childs Co. special products business (candy, cigars, cigarettes, marmalade, etc., made under its own label), has shown an increase over 1930 figures and it is probable that the products may be placed in other distributing channels.

FAMOUS CHEF CONDUCTS TACOMA DEMONSTRATION

TACOMA, Wash.—George Rector, internationally famous chef and director of cuisine for the Milwaukee railroad, was the center of attraction at a recent cooking school sponsored by the Tacoma Times and the Washington Gas and Electric Co.

The school, which was held for three days in the First Baptist Church, was attended by thousands of Tacoma housewives.

Rector, Chef Chauveau, and his assistants used an Electrolux refrigerator in all demonstrations on the platform. Some women came to the church nearly two hours before the first demonstration. The noted chef was introduced by Ralph W. Coblenz, manager of the Washington Gas & Electric Co.

Autographed cook books, groceries, and special favors were awarded as attendance prizes. An Estate full enamel range, valued at \$200, was offered as grand prize.

SCHOOL CAFETERIA USES ELECTRIC REFRIGERATION

DES MOINES, Iowa.—Simple and nourishing, but varied meals served to the 165 boys and girls in D. W. Smouse Opportunity school in this city will be made up of foods protected by electric refrigeration. A General Electric refrigerator, Model CS-450, has been installed in the cafeteria of the school. The school building was erected at a cost of \$333,000 by Dr. D. W. Smouse, former Des Moines physician, and Mrs. Smouse, now a resident of Los Angeles, Calif., for the education and care of physically handicapped children of this city.

Accustomed to houses, the children found that the furniture and playthings designed for normal youngsters had been placed in this school to suit their own particular needs.

4,000 WOMEN REGISTER FOR GAS COOKING SCHOOL

SEATTLE, Wash.—With an average attendance of 950 women a day, the recent four-day Gas Cooking school sponsored jointly by the Seattle Gas Co., Seattle Times, and other gas appliance dealers closely approached a total registration of 4,000.

Miss Ella Lehr, director of the school, used an Electrolux refrigerator.

DEMONSTRATIONS AID IN SELLING PROSPECTS

(Editor's Note: This is the second of a series of short articles on the purposes and functions of a successful home service bureau, prepared by Miss Edwina Nolan, home service director for the Electric Refrigeration department, General Electric Co.)

By Edwina Nolan

ONE of the most important functions of a home service bureau operated by a distributor of electric refrigerators is that of conducting demonstrations to prospects. Bringing prospects together at the showroom for specially-arranged demonstrations is an effective means of paving the way for sales to those who are just slightly interested in buying.

Showroom demonstrations of the refrigerator, combined with lectures to groups of women, are extremely profitable. A definite program should be carried out. The object of this type of demonstration is to stimulate interest, not only on the part of the casual visitor, but on the part of prospects who are undecided.

To have a prospect visit a showroom and actually watch the preparation of dessert or salad and then eat the finished refrigerator product is sometimes the deciding factor in a sale. Some women cannot be sold a refrigerator unless they actually watch it in operation.

Special letters or invitations should be sent to prospects and users, inviting them to attend the demonstration. A call by telephone, or personal contact, will create an even more enthusiastic interest. An attractive window display announcing that a demonstration is to be conducted and that light refreshments will be served throughout the day is an effective method of inducing visitors to attend.

Showroom demonstrations over a period of four or five days at a time have proved successful. A program for such a series of demonstrations might be:

First Day: First, make Philadelphia ice cream, orange cream sherbet and fruit salad and get your set-up made. For the afternoon display, make Philadelphia ice cream and fruit salad and finish one tray of orange cream sherbet to demonstrate the method of adding the cream to the frozen orange pulp. Then give a talk on food preservation and how to place foods in a refrigerator to obtain the best results.

Second Day: Make tuna fish salad and chocolate ice cream and discuss, as part of your talk, infant and child feeding. Impress upon them the necessity of having milk and other dishes for children properly preserved and the bacteria action on milk if not kept at 50° or under.

Third Day: Discuss left-overs. Make bisque tortoni, frozen pineapple cheese salad, and grape ice cream. You might make a vegetable salad, using peas, tomatoes, asparagus tips, cucumber and celery, with lemon jelly foundation. Also, you might give the visitors a serving of the chocolate ice cream which you made the day before, during the second day's demonstration.

Fourth Day: Discuss suggestions for parties. In the morning make a bisque tortoni, freeze it in paper cups, sprinkling the top with chopped nuts and bits of candied cherries. For the demonstration make frozen fruit salad and chocolate ice cream.

For variety, it might be well to have a day on refrigerator cookies, puddings and rolls, making them one day and serving them the next day. It also might be well, in talking to the groups, to bring out other features of the refrigerator, besides dessert making, such as:

- (a) Time and labor-saving.
- (b) Protecting the family's health.
- (c) Planning, preparing and adding variety to menus.
- (d) Cutting down food expenditures by marketing twice a week and saving money through quantity buying.

Home service directors, however, should be certain the refrigerator is properly filled and displayed. A definite color scheme should be carried out insofar as possible.

Various advantages of the refrigerator can be brought out effectively in a four-day demonstration. For instance, radishes and celery, prepared in the usual manner, may be placed in a mason jar in the refrigerator on the first day and then the jar may be opened on the fourth day, letting the women taste the radishes and celery. They will find that they are crisper and daintier than when first placed in the refrigerator.

Also a display showing economy in one large can of fruit at 22 cents rather than three small cans at 10 cents each. In most communities the local merchant will be glad to stock a refrigerator free of charge for the advertising obtained. The accessory case should always be shining and well filled.

SUBSCRIPTION ORDER

Refrigerated Food News
550 Maccabees Building
Detroit, Michigan

Gentlemen: Please enter my subscription to REFRIGERATED FOOD NEWS, beginning with the first monthly issue, September 1, 1931.

United States and Possessions and all countries in Pan American Postal Union: ☐ \$1.00 per year. ☐ Three years for \$2.50.

All other countries: ☐ \$1.50 per year. ☐ Three years for \$3.50.

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Street Address

City and State

LITTLE STORIES OF INTERESTING
PEOPLE
IN REFRIGERATED FOOD FIELDS

• THE DISPLAY CASE •

By GEORGE F. TAUBENECK

LITTLE STORIES OF INTERESTING
IDEAS
IN REFRIGERATED FOOD FIELDS

Experiment

Not because we intended to, particularly, but largely because circumstances forced it upon us, the editorial staff of this paper has been conducting an experiment in the improper refrigeration of foods this summer.

All of us—Engineering Editor John Schaefer, who is particular enough about his foods to qualify for a diet specialist; Assistant Editor Jack "Moby Dick" Adams, who acts as commissary and chief purchasing agent, also assistant cook; Star Reporter Elston Herron, "the Perspiration Kid," who eats whatever is set before him and no questions asked; Philosophizing Phil Redeker, who is too much in love to know what he is eating, or care; and Ye Editor, who has an appetite paralleling that attributed to Primo Carnera—are encamped in a summer cottage on a lake near Detroit (sure, come on out and see us some time).

John Dittler, the missing male member of the department, is affluent enough to have a cottage of his own, a wife, a car, and a dog; and hence hasn't joined the experimental party.

Furnished with this rented cottage was everything from bedding to silverware. The refrigerator is—sh-h-h—an icebox. We couldn't help it; it goes with the cottage.

One of the most important members of this menage is Dr. Willard Arthur Goodell who acts as chief cook and caretaker. Doc was once a college professor, is an ex-missionary to the Philippine Islands, a lecturer, and whatnot.

Being a Yale man, he knows what's what and why (although his vast knowledge does not prevent him from having the most delightful sense of humor in captivity).

One of the things that Doc is very sure about is electric refrigerators. For the last five years he has prepared his own meals with the aid of an electric refrigerator, and to be deprived of one this summer is the greatest calamity he has suffered since the week he failed to get his of the *The New Yorker*.

We'd like to suggest to refrigeration salesmen that if they are in need of some good fodder for their sales talks, they can get some first class dope from Doc.

The learned professor can tell them in 16-cylinder words just why foods must be kept under 50 degrees to be palatable, why the ice cube and its variations comprise the greatest culinary invention of the age, and how 57 varieties of tempting salads and desserts can be concocted in no time at all with the aid of an electric refrigerator.

And what he has to say about ice refrigeration is a caution.

After some weeks of experimentation, the editorial staff of the *News* brings in a verdict exactly in accordance with that handed down by Doc.

Every time I drink a luke-warm bottle of milk, I can envision billions of microbes running down my throat, multiplying in geometrical progression on the path 'twixt the cup and the lip.

When the ice cream that Doc brought back from the crossroads store a couple of hours ago comes forth from the icebox as soupy as the butter, I sigh for the good old days of hotel life.

And as for keeping bottled goods on ice—well, that's just about as feasible as trying to stay 16 rounds with Max Schmeling.

Take it from us, a flimsy icebox and a chunk of ice are not refrigeration, but just a nuisance.

All in all, we're convinced that the electric refrigeration industry is serving a genuine need. And with Doc, we believe that anyone who tries to prepare summer meals without the aid of electric refrigeration is hopelessly handicapped. Amen.

Beer and Cleanliness

For variety, the above-mentioned and foregathered editorial staff of the *News* sometimes eats dinner at a roadhouse stationed on the highway.

This roadhouse is efficiently and profitably managed by the owner whom, for obvious reasons, we shall call "Joe." Now Joe has good steaks, and good chicken dinners. He also prepares non-pariel barbecue sandwiches.

But what especially attracts his customers is the very cold beer he serves. Yes, Joe's place might be called, generically, a "speakeasy."

Joe has an idea. Personally, we think it's a crackerjack. He uses only the very best of modern kitchen equipment, and he keeps his place as clean and neat as a Baltimore doorstep. His reasons:

(1) Federal agents and county officers who drop in and take a look around are invariably bamboozled by the appearance of the place (outwardly it is just another barbecue inn; those who are in the know have access to the beer garden by a secret entrance).

Its cleanliness and fine equipment deceive even the best of the snoopers, says Joe.

(2) Visitors are always impressed by his big electric refrigerator (which cools the beer), his electric range, his electric dishwasher, his electric meat slicer, his electric percolator, and other modern electrical devices.

He uses nothing but electricity, and does very little by hand.

When patrons are shown these devices, declares Joe, they at once believe that the food (and the drink—which is important!) must be of the highest quality. And it is.

Most speakeasies are filthy. And most barbecue stands we've seen aren't much better. But here is a man who spends his money for modern kitchen equipment and for cleanliness. And he is stowing away handsome sums in a Detroit bank as a result.

His waitresses are freshly uniformed each day. So well groomed are they that one almost suspects Joe has a beauty parlor hidden away in one of the numerous nooks and crannies of his place.

The impression these waitresses make is commensurate with that made by Joe's modern kitchen, his spotless linen, and his polished oak woodwork. One implicitly TRUSTS a "jernt" like that, and is willing to pay the round, healthy charges that Joe soaks any and all comers.

P. S. If the gentle reader fears that I may have placed Joe in a predicament with this story, please rest easy, and get a good night's sleep tonight. Joe has that little matter all arranged. Great little fixer, Joe.

Golf

Some would-be Bobby Jones is always saying, "I'd rather play golf than eat." You know, you've heard him.

So one wise restaurant manager here in Detroit put golf and food together, and got some additional business.

In the window of Coffee Dan's, which isn't so low-brow as it sounds, stands a handsome bag of clubs and a big blue and gold sign.

"Every time you eat here," the sign leads off, in big scare letters, "you get a chance to win this bag, three woods, and six irons. There's a drawing every Saturday night, and the person holding the winning number gets the outfit, whether he is here or not."

Says the manager. "There is always a flock of people passing by, just looking for some place to eat. They think one place is just as good as another.

"Well, they see that set of clubs in here, and think they might just as well have a try at them and eat at the same time. Then we figure that if they eat one meal in here, they'll come back for more, clubs or no clubs. It's done the business, all right."

Signs

When Sam Corben *does* decide to talk, he explodes. He spouts wordless words. He gestures with his tea towel. He scowls when he isn't understood, and lets fly again.

That's how he acted when we walked into his little confectionery the other day and innocently asked him why he had his place plastered with signs.

"You think I crazy? Wy I got dem? Wy, to make more money, o' course."

"Dese people, dey come in here to buy a drink, anything to cool demselves. Dey don' care whether dey spen' a nickel, a dime, or feefteen cents."

"But leesen. Eef you don' remind dem, what dey say?—'Lemon phos, cockencher, orange julep.' And dey costs a nickel."

"But wat dey say when dey see my pretty signs—choc'late fudge, whip cream, lime reekies an' all dat—painted up dere in green and purple?"

We didn't know. What did they?

"Wy, dey say, 'Give me dat,' and dey point at one of dem,"—the tea towel swung toward the mirror.

"And leesen, dose cost feefteen cents—not no nickel. I make money dat way, see?"

We did.

Sam went on:

"You see, it's like dis. We guys dat run dese confection'ries, we can't show none of dis stuff dat we sell. It'd melt. So we just got to tell da folks about it, dat's all, see?"

Manufacturers of low temperature display cases, please note.

Picnics

Confectioners who are complaining because there's nothing new under the sun might do well to take a hint from the Sanders' confectionery here. (Sanders' claims, you know, to have invented the ice cream soda).

This store makes a neat little profit during the summer season from the sale of picnic lunches.

The business started three years ago as a pure experiment, but the management found that people liked to save themselves the trouble of making sandwiches, buying pickles and cakes, and packing lunches in wobbly baskets.

Last year, the idea was tried again, and still orders increased.

This year the packed picnic lunch is a specialty. The store packs enough food in an attractive green and white box for one person, and

charges an average price of 45 cents per box.

Now, one of the packers tells us, they pack scores of picnic cartons each day, and not only make a nice profit, but are able to sell quantities of food that otherwise would be sold by grocers and delicatessens.

Pop

Last week we were walking along W. Adams St., in Detroit, when we spied a filling station attendant who was doing a rushing soda pop business. So we ambled over, bought a bottle, and made words with him.

Right in the midst of our conversation, a new Hupmobile sedan rolled in and stopped. From the front seat, a man shouted out: "Give this kid in the back seat a bottle of pop. Give him two bottles of pop."

We glanced casually into the back seat. There, with his mother, was a little fellow who looked very much abashed.

"All day long," the sometimes-prod parent growled, "we've been riding, and every darn time this kid gets near a place where there's something to drink, he sets up a howl. The only time he's stopped yelping for another drink, all the way from Missouri, is when he's been asleep."

"By gosh, everybody's talking about what a wonderful thing it is

to have radios under the dashboards of cars, but that don't mean a thing to me. What I want is some fellow who'll build a refrigerator for a car. Then I'll buy one, and maybe I'll ride a hundred miles without hear-this kid's stein song."

The motor roared and the act ended before we had a chance to tell him about experiments which have been conducted along that line. Too bad.

Little Brother Grows Up

For more than a year now, *ELECTRIC REFRIGERATION NEWS* has had a little brother, clad always in yellow, tagging along behind. This little brother, which has gone through all the stages—and then some—of ailments and developments common to the young, is now coming of age.

Beginning September 1, the *Refrigerated Food Section* of *ELECTRIC REFRIGERATION NEWS*, will become *REFRIGERATED FOOD NEWS*, as announced elsewhere in this issue.

Its purpose is clear: To give manufacturers, wholesalers, and retailers of food the news about refrigerated food developments.

And judging by the amount of news we can already see looming up over the horizon, there should be plenty to talk about.

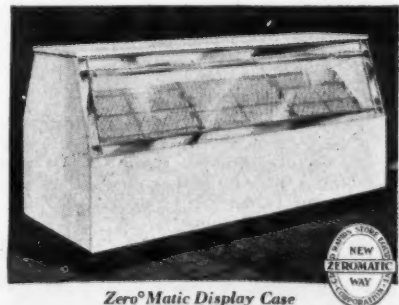
We trust you will find the new publication worthy of the same keen interest and wholehearted support accorded its big brother.

Food Merchants Need
ZERO°MATIC and CHILL-O°MATIC
Display Cases

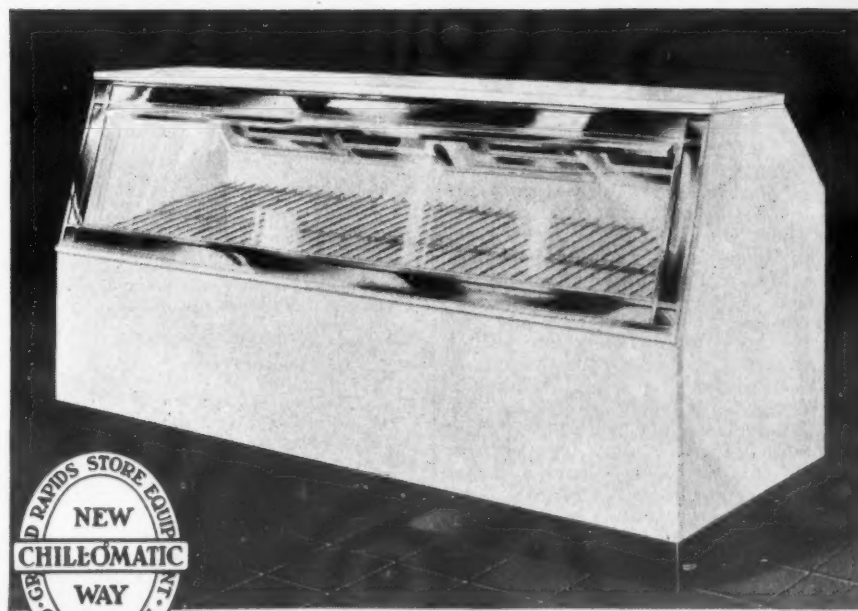
New-Type Frosted and Fresh Food Equipment Increases Profits for Food Merchants and Opens up New Market for Refrigeration Dealers and Distributors

RECENT developments in retail food merchandising have opened up new profit opportunities for refrigeration dealers and distributors. The public has definitely accepted frosted foods and pre-cut fresh meats, for a recent survey shows that 72% of the meat sold is pre-cut. Every day more grocers and delicatessen owners are entering this new market. They will all need display and storage equipment.

To meet this demand, the Grand Rapids Store Equipment Corpo-



Zero°Matic Display Case



Chill-O°Matic Fresh Meat Case

ration, world's largest manufacturers of store equipment, has introduced a complete line of New Way equipment. There are three types of cases to meet all requirements. The Zero°Matic Frosted Food Display Case, the Chill-O°Matic Fresh Meat Case, and the Zero°Matic Junior, a smaller frosted food case. Exceptionally well-constructed and uniquely designed, these cases are guaranteed to give long life and economical operation.

Merchants who get into the packaged food business will want only equipment that will be sure to

protect the food from spoilage and insure their profits. It will pay you to handle the New Way line. Send today for further information. You can use the coupon entirely without obligation.

THIS COUPON WILL BRING YOU
FURTHER INFORMATION

GRAND RAPIDS STORE EQUIPMENT CORP.
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COOLING DRINKS FOR AUGUST'S 'DOG DAYS'

Iced Drinks Easily Made with Electric Refrigerator's Assistance

By Phil Redeker

PROBABLY the most popular common spot during the "dog days" of August will be the refrigerator door—a place that will be visited hourly in millions of homes by tired housewives, dry-throated infants not yet tall enough to reach the latch, perspiring youngsters running in from play, and thirsty bread-providers who will march directly through the house to that favored spot as they enter the home after a day's work, and whose visits will proceed at intervals until the "nightcap" has been drunk.

Possibly the two most popular iced drinks are iced-tea and iced-coffee. They do not truly deserve the name, "old favorites," because their popularity has gained its place only with the past decade.

A probable reason for the popularity of these drinks arises from the fact that they may be quickly prepared and served by the modern hostess. Recipe advisers point out, however, that there are many details to be carefully noted if one is to make really good iced-tea and iced-coffee.

These drinks are best when freshly made. They should be made slightly stronger than when they are served hot as the melting ice dilutes their strength.

There are three important rules to be observed in the process of making these iced drinks. One who sets about to prepare these drinks should use fresh coffee of good quality, freshly drawn and freshly boiled water, and a porcelain, enamel, or glass coffee pot for boiling, percolating or filtering, whichever method is preferred.

The way to the preparation of good iced-tea and iced-coffee has become simplified and the result enhanced through the development of the uses of electric refrigerator accessories.

Coffee Ice Cubes

Take coffee ice cubes, for instance. To make them, freshly made coffee is poured into the freezing-tray of an electric refrigerator and the cubes are allowed to freeze in the usual way. In serving, coffee of average strength is poured over the cubes, and you have iced coffee that will retain its strength instead of growing weak and flat, as would be the case with the melting of ordinary ice.

In the case of tea, also, have come intriguing developments through the use of cubes. If a half a slice of orange section is frozen in each compartment of the tray, a refreshing touch is given to the beverage when served.

This may be varied with a similar use of lemon sections, or if one enjoys adding a bit of color to create an appeal to the esthetic sense, a maraschino cherry in red or green, or a sprig of mint, adds an interesting touch when frozen in the crystal-clear cubes.

For those who desire an added "kick" in their iced-tea, it is suggested that ginger ale in proportionate quantities be frozen in the tray.

Innovations such as these made possible by electric refrigeration add a piquant flavor to these favorite drinks, and lend a dashing and cooling appearance to the beverage.

Lemonade is an old "stand-by" whose popularity refuses to die. The ingredients for this drink are lemons, sugar and water mixed to suit the taste—and there are as many tastes as there are drinkers of the beverage, so that it would be all but impossible to render a formula designed for anybody's liking but our own.

A number of fancy variations of this veteran drink have been devised and the following collection represents some of the more enticing numbers.

Lemonade

Glorified Lemonade

2 cups sugar
3 cups water
Juice of 3 lemons
Juice of 2 limes
2 cups ginger ale (orange or lemon carbonated beverage may be substituted).
Boil sugar and water ten minutes. Cool. Add juice of lemons and limes and ginger ale.

Pineapple Lemonade

2 cups cold water
1 cup sugar
2 cups grape carbonated beverage
1 quart carbonated water
1 cup grated pineapple
Juice of 3 lemons
Make a syrup by boiling water and sugar for five minutes. Cool. Add pineapple and lemon juice. Add the carbonated beverages just before serving.

Honolulu Lemonade

2 cups boiling water
1 cup sugar
4 cups ice water
1 can grated pineapple
Juice of 3 lemons
Dissolve the sugar in the boiling water

and boil 10 minutes. Add the lemon juice and grated pineapple. Chill, strain and add the ice water. Serve with ice cubes.

Spiced Lemonade

2 cups sugar
Juice of 6 lemons
2 cups of hot water
3 whole cloves
1 stick cinnamon
Make a thick syrup by cooking the sugar and water together without stirring. Add the spices and grated outer rind of one lemon. Cool and add the lemon juice. Dilute with ice water and serve with ice cubes.

The home service departments of the refrigerator companies have devoted much of their time devising recipes in their experimental kitchens which can be made up into drinks quickly and easily with the help of the quick-chilling lent by electrical refrigeration.

The following formulas represent an attempted compilation of all the tested recipes for non-brewed cold drinks that could be located by an extensive research in literature dealing with recipes.

Chocolate

Iced Chocolate

2 tablespoons chocolate syrup
1 glass milk
Have milk and syrup thoroughly chilled. Add syrup to glass of milk and stir until thoroughly blended.

Chocolate Egg Nog

1 egg
2-3 cup milk
2½ tablespoons chocolate syrup
1 ice cube crushed
Put all ingredients in beverage shaker and shake thoroughly. Then pour into glass and serve at once. A few gratings of nutmeg or a few grains of cinnamon may be sprinkled on top. If no shaker is available, the white and yolk of the egg should be beaten separately, and then combined with other ingredients.

Iced Cocoa

Prepare cocoa, using 6 tablespoons of cocoa. Pour over cracked ice in tall glasses. Stir well to blend and chill in refrigerator. Sweeten to taste. To serve four.

Iced Chocolate

Cool hot chocolate and pour over cracked ice in tall glasses. Stir well to blend and chill. Sweeten to taste.

Chocolate Milk Shake

4 tablespoons cocoa syrup
1 glass milk
Combine ingredients and shake well with cracked ice. Serve in tall glass. For chocolate float add 3 tablespoons chocolate ice cream.

Frosted Chocolate

1½ tablespoons cocoa syrup
½ cup milk
4 tablespoons ice cream
Charged water
Combine cocoa syrup, milk, and ice cream. Stir well. Add charged water to fill glass. Top with 1 tablespoon whipped cream.

Mint Chocolate

6 tablespoons cocoa syrup
¾ cup milk
2 tablespoons cream
¼ teaspoon peppermint extract
Mix ingredients in order given and shake well with cracked ice. Pour into tall glass and top with whipped cream and a sprig of mint.

Iced Cafe au Lait

Make medium or strong coffee, and while it is being prepared, scald an equal amount of milk. Pour the coffee and hot milk together into the glasses, in equal amounts, one pot in each hand. Chill and serve iced with whipped cream on top.

Coffee Milk Shake

Add iced coffee cubes to whole milk, top milk or thin cream, using two or three cubes to each glass of milk. Add a few drops of vanilla. Add a tablespoon of plain sugar syrup and shake in beverage shaker, if desired.

Carbonated Iced Tea

2 teaspoons tea
2 cups boiling water
Juice of 2 lemons
1 pint ginger ale
Sugar syrup
Mint
Ice cubes
Pour freshly boiling water over tea; let stand about 3 minutes. Strain, cool, add lemon juice and enough ice cubes to chill thoroughly. Just before serving add ginger ale and enough sugar syrup to sweeten. Pour into tall glasses, adding extra ice cubes if desired; top with a sprig of mint.

Chilled Tomato Juice Cocktail

Chill tomato juice in refrigerator for several hours. Serve same as orange juice.

Grapeade

1 pint grape juice
Juice of 3 lemons
2 tablespoons sugar syrup
1 pint carbonated water
Combine the grape juice, lime juice and sugar syrup. Just before serving add the carbonated water. Fill glasses with ice cubes.

Cafe Egg Nog

Beat one egg white until stiff. Beat egg yolk, adding two or three tablespoons coffee syrup and fold into beaten white. Add one cup cold milk gradually; beat one minute with egg beater. Serve in tall glasses. Add a grating of nutmeg if desired or a few drops of vanilla.

Punch, Ale

Foundation Punch

½ cup water
4 oranges
2 lemons
1 cup sugar
Squeeze the juice from the oranges and lemons. Boil sugar and water to the thread stage. Add fruit juice and enough water to make 2 quarts. One cup of chopped mint leaves may be steeped in boiling water, strained and substituted for part of the water. Cool the punch, turn into a glass jar, and store in refrigerator until ready to use.

Fruit Punches

Take equal parts of the foundation punch and berry or other fruit juices, combine, and chill in electric refrigerator.

Fruitade

1 heaping tablespoon crushed pineapple
2 maraschino cherries
1-3 cup foundation punch
1-3 cup ginger ale
Combine all ingredients in tall glass. Serve with sprig of mint.

Five O'clock Punch

¾ cup grape juice
¾ cup grape fruit juice
¾ cup ginger ale
¾ cup foundation punch
Combine all ingredients and serve in tall iced tea glasses.

Grape High Ball

One cup lemon juice, 2 cups purple grape juice, sugar to sweeten, grated orange peel, seltzer water to make 1½ quarts.

Cherry Cocktail

Mix together stoned black and stoned white cherries. Add a quantity of apple balls cut out with a French potato ball cutter or with ½ teaspoon of your measuring spoon set. Sprinkle with lemon juice and place in electric refrigerator to chill thoroughly.

Cherry Grape Ale

In a 10 ounce glass place 2 ounces of prepared ginger ale, 1 ounce of plain grape juice, 1 ounce cherry syrup, add seltzer water and a little lemon juice.

Orange Iced

Prepare the juices of 3 oranges and 3 lemons and add to this one part of water. Fill glasses containing shaved ice ¾ full with this beverage and add tablespoonful of orange sherbet to each glass.

Grape Punch

1 pint grape juice
1 quart water
Juice of 2 lemons
Juice of 1 orange
1 cup sugar
Heat water and sugar until all sugar is dissolved. Cool. Add to fruit juice and place in refrigerator to chill. Serve with ice cubes frozen with lemon slices.

Pineapple Punch

1 heaping tablespoon crushed pineapple
2 maraschino cherries
1-3 cup foundation punch
1-3 cup ginger ale
2 ice cubes
Combine all ingredients in tall glass. Serve with sprig of mint.

Orange Mint Punch

½ cup sugar
3 cups water
6 sprays mint
4 cups lemon carbonated beverage
3 cups orange carbonated beverage
2 cups ginger ale
2 cups carbonated beverage
Boil sugar and water five minutes. Cool. Add other ingredients which have been previously chilled. Wash mint and bruise stems. Add to mixture and serve from a punch bowl with ice cubes.

Ginger Ale Nectar

12 oranges
6 lemons
1 cup canned pineapple juice
½ cup maraschino cherries
Sugar to suit taste, 1½ to 2 cups
2 quarts ginger ale
Squeeze the oranges and 4 of the lemons, slice the other two. Add the pineapple juice. Cut a few strips of orange and lemon rinds, add 1 pint of water and sugar, boiling five minutes. Cool the syrup. Combine the syrup and fruit juices and add the ginger ale, previously chilled. Garnish with cherries and serve from a large punch bowl with blocks of ice in it.

Loganberry Fizz

1 cup loganberry juice
½ cup pineapple juice
½ cup sugar
Juice of 2 lemons
2 cups raspberry carbonated beverage
Mix loganberry and pineapple juices and add sugar. Add lemon juice and after standing 1 hour add crushed ice and raspberry beverage.

Hawaiian Punch

3 tablespoons tea
1 quart boiling water
1 quart cold water
Juice of 6 lemons
1 can shredded pineapple
1 cup maraschino cherries
2½ cups sugar syrup
Pour freshly boiling water over tea and

allow to stand about three to five minutes. Strain into bowl; add cold water, lemon juice, shredded pineapple, maraschino cherries and sugar syrup. Chill. Serve in punch bowl or in tall glasses, with plenty of ice cubes. (This will make between 4 and 5 quarts of punch.)

Grape Gin

1 bunch fresh mint
Juice of 5 lemons
½ cup sugar
½ cup water
2 cups grape juice
1 quart ginger ale
Shake a bunch of mint under faucet, remove leaves, reserving tips of spray for garnish and put leaves with lemon juice, sugar and water. Let stand 30 minutes. Strain, add grape juice and ginger ale. Pour over block of ice and serve in glasses with mint leaves and slices of lemon for garnish.

Ginger Ale Punch

½ cup sugar
1 cup water
Juice of 3 lemons
1 cup loganberry juice
2 cups ginger ale
2 oranges, thin slices
Make a syrup of sugar and water by simmering for 5 minutes. When cold add the lemon and loganberry juices. Just before serving add ginger ale. Garnish with orange slices.

Sarsaparilla and Limeade

¾ cup water
1 cup water
2 bottles sarsaparilla (small)
½ cup lime juice or ½ cup lime carbonated beverage
Boil sugar and water for 5 minutes. Add the lime juice and put a tablespoonful into each glass. Add cracked ice and fill up glasses with sarsaparilla. Garnish with slices of lemon.

Orange Blossom Punch

1 cup sugar
1 cup boiling water
6 cups orange carbonated beverage
½ teaspoon tea
2 cups boiling water
Boil sugar and water for 3 minutes. Pour the 2 cups boiling water over the tea. Chill both mixtures and combine. Add orange beverage just before serving.

Cherry Ale

½ cup pineapple juice
Juice of 2 oranges
Juice of 3 lemons
1 cup sugar
2 cups tea infusion
1½ cups cherry carbonated beverage
1 quart ginger ale
½ cup cherries
1 banana, sliced in wafers
Mix together the pineapple, orange and lemon juice with the sugar. Add the tea

and stir in quickly the cherry carbonated beverage and the ginger ale. Then stir in the cherries and banana slices.

Arctic Ale

2 cups freshly made strong tea
Juice of 4 lemons
Juice of 2 oranges
¾ cup sugar
3 cups ginger ale
Mint leaves
Add sugar to tea and let stand until cold. Add lemon and orange juices. Mix well. Add ginger ale. Pour into glasses with cracked ice. Garnish with mint leaves.

Champagne Punch

4 teaspoons powdered sugar
Juice of 6 oranges
2 cups cold tea, strong
1 cup maraschino cherry juice
6 bottles pale dry ginger ale
Combine chilled ingredients. Stir well. Garnish with sliced oranges and serve in champagne glasses.

Cleveland Punch

2 cups cider
2 cups grape juice
1 cup grapefruit juice
5 cups cold water
Add sugar to taste
Mix the cider, fruit juices and water. Sweeten to taste. Serve with ice cubes.

Currantade

1 cup hot water
¾ cup sugar
1 cup cooked currant juice
1-3 cup lemon juice
6 cups cold water
Dissolve the sugar in the hot water. Add the fruit juices and dilute with the cold water. Chill thoroughly and serve with ice cubes.

Pineapple-Lime

1 pint water
1 cup sugar
1 can No. 2 grated pineapple
Juice of 3 limes
1 quart ice water
Make syrup by boiling water and sugar together for 10 minutes. Add pineapple and lime juice. Cool and add ice water. Serve with fancy ice cubes.

Grape Lemonade

3 cups grape juice
Sugar syrup
Juice of 3 lemons
Mix grape juice and lemon juice and add sugar syrup to taste. Chill and serve in tall glasses partially filled with crushed ice cubes.

Pineapple Raspberryade

1 cup water
1 cup canned crushed pineapple
1 cup canned raspberry juice
Juice of 1 lemon
Mix all ingredients together and keep in refrigerator until ready to serve. Serve in tall glasses with ginger ale cubes.

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Comes completely engineered with the Super-Cold system of temperature and humidity control and is ready to connect to any standard make of compressor, either methyl or sulphur. Over 5,000 perfected Super-Colds in use throughout the United States and several foreign countries. Warehouse stocks in principal cities insure quick deliveries. One of the easiest and fastest selling specialties on the market. A few choice states still available to distributors. Sold only through dealers in protected territories. Write for descriptive literature and dealer proposition. Dept. C-60.

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1020 East 59th Street, Los Angeles, Calif.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS
VOL. 5, No. 24, SERIAL No. 126Copyright, 1931, by
Business News Pub. Co.

DETROIT, MICHIGAN, JULY 29, 1931

Entered as second class matter
Aug. 1, 1927, at Detroit, Mich.FIFTEEN CENTS PER COPY
TWO DOLLARS PER YEARFRIGIDAIRE WINS
TRADE MARK CASE
AGAINST C. F. HALLPatent Commissioner
Calls 'Arctic-Aire'
Interference

WASHINGTON, D. C.—Opposition of the Frigidaire Corp. to the registration of the trade-mark "Arctic-Aire" by Carter F. Hall, manufacturer of turbines, compressors, and pumps as the Arctic-Aire Co., Inc., Baltimore, Md., was passed upon favorably by the commissioner of patents of the U. S. Patent office here recently.

This decision of the patent commissioner was a reversal of the ruling of the examiner of trade-mark interferences that had dismissed Frigidaire's claim of interference, adjudging the applicant entitled to the registration for which he had applied.

The opinion of the patent commissioner as presented by W. A. Kinnan, first assistant commissioner, follows:

"The mark 'Arctic-Aire' is used upon turbines, compressors, pumps, and parts of the trade-mark applicant. The specimens disclose these parts to be elements of a cooling system.

"The opposer claims prior adoption and use of the notation 'Frigidaire' as a trade-mark for refrigerators, and sets up ownership of registration No. 137,502, issued Nov. 23, 1920, under the Act of March 19, 1920, of this mark for use upon this class of goods.

"Only the opposer has taken testimony. It satisfactorily appears that it has been using its mark upon its goods for a dozen years or more, has spent very great sums in advertising, and has sold large numbers of its refrigerators under its mark and is, in consequence, presumably in possession of a good will which is a very valuable asset to its business.

"Under these circumstances, if there is reasonable doubt, it must be resolved against the newcomer, who is the applicant here and who does not allege adoption and use of his mark prior to August, 1929.

"The examiner of trade-mark interferences held, and it is believed rightly, that the goods possess the same descriptive properties, being parts of, in the one instance, or comprising, in the other, cooling machines or refrigerators.

"While the applicant's trade-mark includes features besides the words 'Arctic-Aire,' yet these words are the predominating features as shown by the specimens filed in the application and would be readily noted by the purchasing public.

"The opposer's trade-mark and that of the applicant have the same suffix and while the other portions of the marks differ in appearance, spelling, and sound, they have the same significance. When the mark of the opposer and the words 'Arctic-Aire' of the applicant are considered as a whole they seem confusingly similar.

"The decision of the examiner of trade-mark interferences dismissing the opposition is reversed, the opposition is sustained, and it is adjudged the applicant is not entitled to the registration for which he has applied."

ROBBINS & BURKE FINISH
50 REFRIGERATED TRUCKS

CAMBRIDGE, Mass. — Robbins & Burke, Inc., manufacturers of trucks employing mechanical refrigeration and solid carbon dioxide, recently finished an order of 50 mechanical trucks for the General Ice Cream Corp., each to handle 500 gallons of ice cream.

The refrigeration equipment is powered by a 5 hp., 4-cylinder gasoline engine, running at about 900 r.p.m. The engine is belted directly to the compressor. An electric motor propels the compressor when central station current is available.

According to Joseph Robbins, the company formerly furnished a 4-cylinder gas engine in conjunction with a 110-volt generator, the current developed being used in turn to operate the refrigerating apparatus, but due to the excess weight and high cost, the design now omits the generator and compressor motor.

The elimination of the generator and

(Concluded on Page 4, Column 3)

C. E. Rice Develops
Refrigerant Drier

SPRINGFIELD, Mass.—Charles Rice, refrigerating engineer, and former Copeland distributor in this territory, has invented and put on the market, a new refrigerant drier-filter.

It consists of a 2-in. tube with a 2½ in. head of machined steel, cadmium-plated to prevent rusting. The head is of one solid piece, with a hexagonal section to receive a wrench and round section to enclose the strainer assembly.

A ¼ in. flare connection is an integral part of the head. Inside the head is a wire cloth support for the strainer pads, and on this is a fine wire screen stand held in place by a stiff retainer screen over that. The whole is held firmly in place by a brass strainer ring rising slightly above the shoulder of the head, and a gasket overlapping and bringing the ring flush and producing a tight seal by compression.

ICE-O-MATIC TRADE MARK
REGISTRATION IS DENIED

WASHINGTON, D. C.—Permission to register the term "Ice-O-Matic" as a trade mark for electric refrigerators has been denied the Williams Oil-O-Matic Heating Corp., Bloomington, Ill., by the U. S. Patent office.

In a decision by First Assistant Commissioner of Patents William A. Kinnan, it was held that a prior registration of the term "Icy-O" by the Icy-O Metal Products Co., Inc., for a dispensing cabinet for bottled goods prohibited registration to the Williams company.

"It is believed the mark of the applicant and that of the registrant are so similar when considered as a whole, and the goods upon which they are used are likewise so similar in the function at least of keeping articles cold, that confusion would be probable if both marks appear upon their respective goods in the same market," he said.

Terry is Promoted
By Westinghouse

EAST PITTSBURGH, Pa. — M. C. Terry has been appointed chief refrigeration engineer of the Westinghouse Electric and Mfg. Co., with headquarters at East Springfield, Mass., it was announced by R. C. Feicht, director of engineering for the company.

As chief refrigeration engineer, Mr. Terry will report to T. S. Perkins, general manager of merchandising engineering. Mr. Terry was born in New York City. He was graduated from Princeton university in 1915 and attended Columbia Law School from 1915 to 1917, when he entered the U. S. Marine Corps as a second lieutenant. He joined the Westinghouse organization in 1919.

The announcement of Mr. Feicht states that J. H. Ashbaugh, assistant manager of the refrigeration engineering department, will be in executive charge of that department.

SERVEL MACHINES
REFRIGERATE NEW
HERCULES TRUCKSNew Car Is Powered By
Automatic Gas
Engine

EVANSVILLE, Ind. — Production is getting underway here on the new mechanically refrigerated truck body manufactured by Hercules Products, Inc., subsidiary of Servel, Inc.

Announcement of this new Servel equipped body was made by the manufacturers early this summer, and various shows about the country have included displays of Hercules' latest product.

The body is equipped with a special Servel mechanical refrigerating unit, a small motor and a small gas engine entirely automatic. The engine is equipped with a starting motor connected in series with a thermostat and coupled to the battery system of the chassis. This permits the gas engine to cut in of its own accord when the temperature has reached its desired high point, and will shut off when the temperature has reached its desired low point.

Several new features have been incorporated by Hercules in producing this "traveling refrigerator." When the truck is in the service station or loading room, the Servel mechanical refrigerating unit can be operated from local light current. While on the road it is driven by the small gas engine.

The electric motor, included as part of the refrigeration equipment, is to be used in the garage to eliminate running the gas engine while the truck stands in a closed building. The gas supply for the engine is fed through a vacuum tank from the chassis supply tank. Each of the driving units is equipped with an over-running, belt-driven clutch so that when the electric motor is driving the equipment, the gas engine is stationary, or vice versa.

The Servel refrigerating unit is placed immediately under the roof at the front end of the body to secure protection from the weather.

The cooling units are of the slab type, placed on the ends and left side of the body. Two slabs in the center form separate compartments. The coils in the slabs are attached directly to the face sheets of the slabs, and after assembly, the slabs are sealed.

No brine is used, but the design gives a "hold-over" almost equal to a brine solution without the hazard of leaks, Servel engineers claim. If some unforeseen condition should prevent the operation of the mechanical unit, the body will still maintain safe temperatures for several hours, they state.

The slab type chilling unit is designed to give clean-cut appearance to the inside of the body, and also lessens the possibility of damage to coils when loading or enroute.

The truck has a capacity for 60 5-gallon cans, a total of 300 gallons of ice cream. The body is designated as the double compartment type, with two doors on the right (curb) side of the body. Space inside of both refrigerated compartments is 44 in. long by 50½ in. wide, and 32½ in. high. Two empty

(Concluded on Page 3, Column 3)

IRON CO., FRIGIDAIRE PLAN
DOMESTIC AIR CONDITIONER

CINCINNATI, Ohio.—An air conditioning system for the small home—a plant which heats in winter, cools in summer and circulates fresh air throughout the year—has been placed on the market as the result of an agreement between the General Iron Works Co., manufacturers of air conditioning equipment, Cincinnati, and Frigidaire Corp.

The unit is known as the Hot-Kold and consists of an automatic gas fired air conditioning system of the forced air type, a Frigidaire evaporator and compressor. The distribution ducts of the system are used for circulation of the warmed air in winter and the cooled air in summer. The Frigidaire room cooling unit is installed in the central return air duct, and a special by-pass carries the cooled air past the heating unit through an air circulating fan.

The fan, which has a capacity of 600

(Concluded on Page 8, Column 1)

Comfort Assured While You Eat



New "vertiflow" type Frigidaire room coolers please pretty waitresses in Seville Tavern, Dayton, Ohio.

MOHAWK MODEL DESIGNED
FOR LOW-PRICED MARKET

NORTH TONAWANDA, N. Y. — The Mohawk Model 4 electric refrigerator, displayed for the first time at the Radio Manufacturers Association convention in Chicago during the week of June 8, has been built for the low-priced field in small homes and two-person apartments.

The new model stands 46½ in. high, without legs, and 51½ in. high with legs. It is 22½ in. wide, and 22 in. deep, has a food storage capacity of four cu. ft., a shelf area of 6.6 sq. ft., and uses the "Duozone" unit, which is incorporated in all Mohawk models.

The exterior finish of the Model 4 is of treated lacquer, while the interior is of seamless white porcelain. Methyl chloride is the refrigerant used. The compression motor is 1/6 hp., and is of the low-speed piston type.

Ribbon-type shelves are used, and there are two ice cube trays, each with a capacity of 18 cubes.

CLEVELAND FIRM MAKING
ALUMINOL EVAPORATORS

CLEVELAND.—An aluminum alloy known as "aluminol," is used in the new evaporators offered by the Aluminol Products Corp. of this city. Engineers of the company claim that it is neutral to all of the common refrigerants.

Dayton Restaurant
Uses 11 Coolers

DAYTON, Ohio.—Installation of 11 Frigidaire room coolers in the Seville Tavern, popular Dayton restaurant, has led to a 30 per cent increase in business during the first two weeks the coolers have been in operation, according to M. J. Comisar, president of the company operating the restaurant.

Advertising a temperature of at least 15° F. cooler than the outside temperature, the Seville Tavern has made its place of business known for comfortable eating. Customers, it has been observed, have been ordering many more hot plate lunches instead of the salads and sandwiches which are so popular during hot weather. Scarcely a single patron entering the restaurant for the first time, fails to comment on the cooling system, Mr. Comisar says.

AMERICAN EXPANSION VALVE
SALES TOP 1930 RECORDS

DETROIT — More American Automatic expansion valves were shipped during the first six months of this year than all of 1930, according to I. J. Knudson, in charge of refrigeration sales for the American Radiator Co. June of this year was slightly less in sales than May, which is the peak month of the year, but was well above June, 1930, he reports.

DESCRIBES INSTALLATION
METHODS OF EDISON CO.

CHICAGO—Some of the installation methods of the Commonwealth Edison Co. were recently outlined by Don Wetherbee, refrigeration engineer of that company. Installations made by Commonwealth Edison are all of Kelvinator equipment, since it is the Kelvinator distributor here, all Frigidaire and General Electric refrigerators sold by the company being installed by the respective distributing agencies for those machines.

Installations are divided into three classes, self-contained, domestic units, multiple apartment house equipment, and commercial installations.

On receiving a shipment of self-contained units, the service department puts them all on a 24-hour test to observe their performance and find any squeaks or other peculiarities. Then their temperature-holding characteristics are checked by a 12-hour test with recording thermometers. The company has lacquer spray and porcelain repairing facilities to fix any chipped places which may have appeared in transit.

Multiple apartment house installations are made strictly in accordance with the Chicago code, Mr. Wetherbee says. Each single multiple system is limited to 50 lbs. of refrigerant (sulphur dioxide); when more than this amount is needed, separate systems are put in.

All jobs are installed with basement

(Concluded on Page 4, Column 4)

SYNTHANE CORP. APPOINTS CLEVELAND BRANCH HEAD

OAKS, Pa.—Synthane Corp., manufacturer of laminated bakelite products,

has appointed J. W. Davis as its Ohio representative with offices at 1302 Ontario St., Cleveland, Ohio.

Synthane Corp. maintains complete stocks of Synthane laminated gear materials at its Cleveland office, with facilities to deliver full sheets or blanks.

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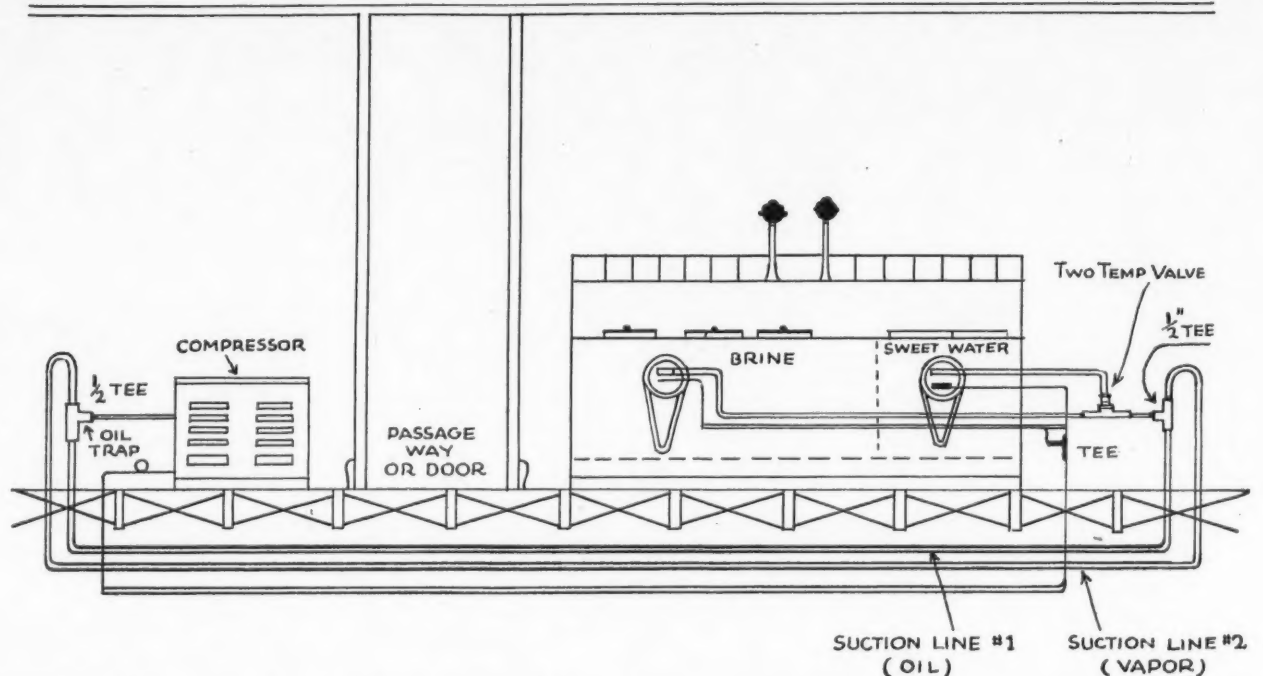
Empire State Building, 350 Fifth Avenue
New York, N. Y.

SERVICE MEN'S FORUM

A COLUMN DEVOTED TO THE PROBLEMS OF SERVICE AND INSTALLATION MEN

Service and installation men are invited to send in practical ideas on the maintenance and installation for publication in this new department—inaugurated with this issue to encourage service men to help other service men. Paul B. Hughes' suggestion for insuring the proper oil return on flooded systems where the con-

densing unit must be installed on the same level as the cooling coils is the first contribution presented. What workable service or installation method have you devised? One dollar will be awarded for each idea used. Address the Engineering Editor, Electric Refrigeration News, 550 Maccabees Bldg., Detroit.



IN ORDER to insure oil return in jobs of the flooded type on installations where there is no basement, or where the compressor is to be placed on the

same floor, it is often necessary for the installation man to trap the lines.

This very often results in an oil logging in the coils, due to the fact that the oil cannot return by gravity, and a worn out compressor body can be expected in a short time.

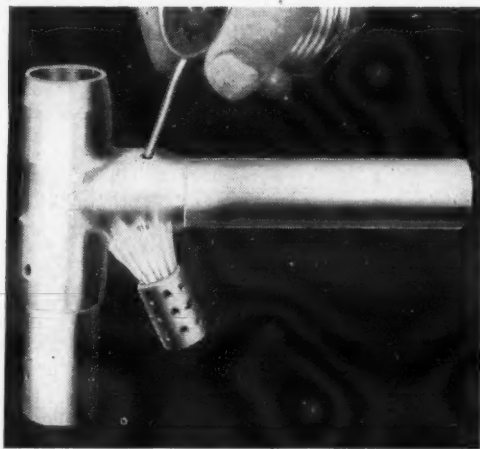
If a double suction line is run, with an oil trap on the coil end and one also on the compressor end, the back pressure in the coils working against the diminished back pressure in the crankcase will permit the compressor to pull

oil along its suction line (No. 1 in the adjoining illustration).

The other suction line (No. 2), will permit the vaporized refrigerant to pass unobstructed to the compressor crankcase, operating low-pressure controls or snap action valves if installed. Variations of this arrangement can be conveniently made to suit similar installations. It is advisable to add a little oil to the job to fill up the oil suction line.

PAUL B. HUGHES,
Instructor, Industrial Tech
Institute, Pittsburgh, Pa.

Specify Mueller STREAMLINE for Compressors, Cooling Units, Gas Lines



FOR these purposes Mueller STREAMLINE Hard Copper Pipe and Mueller STREAMLINE Fittings are used exclusively by some refrigerator manufacturers.

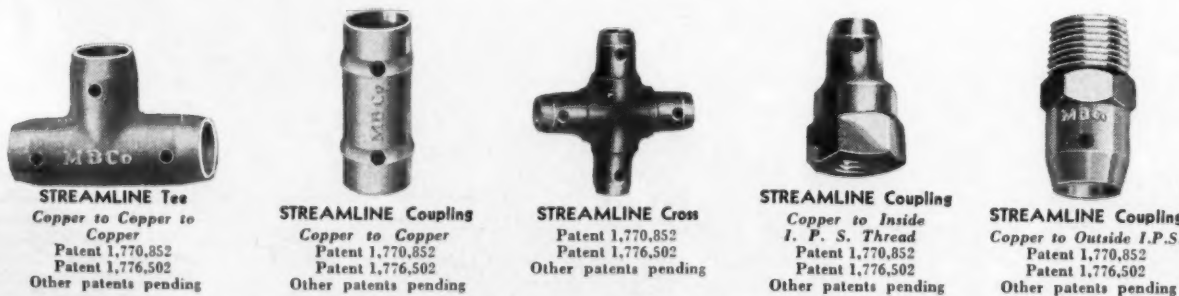
Because of their design, vibration is reduced to a minimum. Because of the construction of the joint, with its thin layer of solder, which forms a bond between pipe and fitting, vibration can cause no failure in the connection.

Because of the positive solder seal by capillary

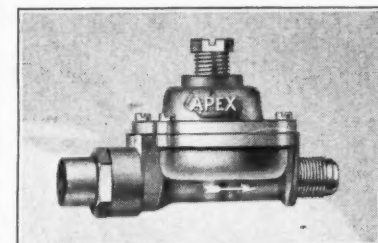
attraction, there can be no gas seepage around the connection. For the same reason it is impossible for condensation moisture to get inside the joint and cause trouble by alternate freezing and thawings.

We also manufacture a complete line of valves and fittings, and can supply your every requirement. If you are not thoroughly familiar with this patented connection, write or wire us at our expense.

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MARSHALLTOWN, IOWA

NEW PROJECTOR MARKS WILLIAMS TYPE K BURNER

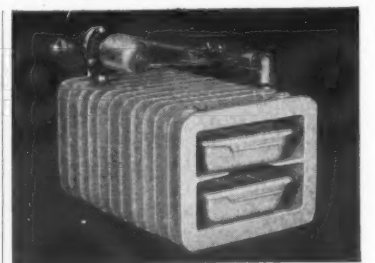
BLOOMINGTON, Ill.—Manufacture of a new low-priced oil burner has been started by the Williams Oil-O-Matic Heating Corp. here. Burning No. 3 fuel oil, the new Model K is made to handle 600 sq. ft. of steam radiation or its equivalent, and has an oil capacity of from one-half to two gallons per hour.

Through a new type of flame projector used in conjunction with the Williams diffuser, combustion is accomplished entirely in mid-air in the "Hushed Heat" burner, according to the manufacturers.

Only three adjustments are required on the new burner—one for quantity of oil, one for proper admission of air for combustion of the pre-determined amount of oil, and one for adjustment of air pressure on the atomizing nozzle.



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7 to 9 cubic feet; 5-tray for same size boxes as the 3-tray, but where additional cubes are required. This unit has one removable shelf, permitting insertion of deep tray or the storage of ice cream or other frozen products. Trays furnished with fronts, of either chrome or white porcelain, or without fronts.

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5842 Trumbull Avenue, Detroit

Enginer Shows How to Keep Correct Cabinet Humidities, Urges Research

By George R. Lindahl,
Vice President, Commercial Refrigerator Mfg. Co.

WHILE the refrigeration industry has been experimenting considerably with the control of humidity in the research laboratories, not enough has been done towards putting this into practice in the field.

However, proper humidities can be effected in ordinary commercial applications. Ice cream cabinets should always be operated with their own compressors, and should never be connected to or operated with higher temperature equipment. The large majority of ice cream cabinets are furnished by the ice cream companies complete with compressor, so there is not much need for multiple installations with an ice cream cabinet attached.

The writer has received complaints that mechanical refrigeration did not keep out meats, as to color and flavor, as well as did ice.

The majority of these letters come from the extreme southern states where the relative humidity is very high. One of the principle complaints seems to be that if the coils are set at a low enough temperature to prevent the meats getting wet and sticky, there is considerable dehydration.

From experiments in the field and in the laboratory, the writer is convinced that the control of humidity is of more importance than is the control of temperature. Test after test proved that fresh meat, as an example, maintained at 45° under correct humidity, would hold color and flavor longer than meats kept at 34° under improper humidity conditions.

Low temperatures in humid climates always cause considerable condensation and, incidentally, oxidation, unless the coiling system is arranged so that all air entering a refrigerator or display case is passed over the surface of the coils before being allowed to come in contact with the foods.

The manner in which many display cases are coiled precludes this, with the result that as the doors are opened there is a rapid condensation, and when the doors are closed, the circulating air picks up this moisture and carries it to the coils.

In controlling humidity, this condensation must not be allowed to occur, except on the surface of the coils. Thus proper distribution of the coils is a prime requisite. Due to the low vapor pressure area immediately surrounding the coils, warm air will naturally surge to this low pressure area, but if this area is too far removed from the point at which the air enters, the weight of the falling dew will overcome the pull of the coils with the result that the foods become wet and sticky.

In experiments covering the past eight years, the writer has found that a relative humidity varying from 79 to 84 per cent relative is as near the ideal condition as possible for all classes of perishable foods.

At this humidity, there is a very slight drying which is so slight that it is hardly visible until several days have elapsed. Also at this relative humidity (if constantly maintained), there will

not be any condensation, as air must reach 100 per cent saturation (the dew point) before it precipitates moisture.

To be able to prevent any condensation on foods, and to hold the air at this ideal condition, requires proper coil distribution, proper coil temperatures, proper cycling and a proper size compressor and coil area. This ideal condition cannot be secured by a hit and miss method.

Even the number of pounds of refrigerant used is of prime importance. Providing that sufficient coil area is properly distributed with regard to factors of insulation and service, a temperature of 34 to 36° F. can be maintained at a 79 to 84 per cent relative humidity with the following suction pressures at the compressor:

Sulphur Dioxide

Cuts in at.....8½ lb. suction
Cuts out at.....1 lb. suction
Operates at.....2 lb. suction

Methyl Chloride

Cuts in at.....22 lb. suction
Cuts out at.....13 lb. suction
Operates at.....15 lb. suction

The above figures are based on display cases or coolers with 4 in. of cork-board having triple glass fronts, and securing a complete defrost on a 2° range.

At this temperature and humidity, fresh meats, fresh fish, fruit and vegetables and dozens of other highly perishable foods can be kept for many days without material discoloration.

The writer has kept fresh fish, cottage cheese, lettuce, parsley, fresh cut meats, smoked and cooked meats, cantaloupes, sliced tomatoes and dozens of other highly perishable items in prime condition as to color and flavor with only a slight drying out for five days.

Even hamburger, which discolors rapidly, has been kept a week in prime condition. The answer, of course, is in the proper control of both temperature and humidity.

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REFRIGERATION
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SERVEL ANNOUNCES REFRIGERATED TRUCK

(Concluded from Page 1, Column 5)

can compartments are provided, one in front to carry 10 cans and the second in rear to carry 13 cans.

The compartment doors are sealed by expansion strips, forced in place by springs around the edge of the doors. The latter are fitted with an inside locking device and a chromium-plated compression handle for a padlock on the outside.

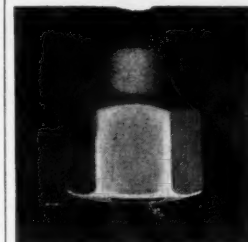
The floor of the body is 6 in. thick, 5 in. of which is Dry-Zero insulation. A hardwood slatted floor over the metal in the bottom offers protection to the surface.

The body maintains a predetermined temperature operating on thermostat control. A uniform temperature of 8° F. can be maintained regardless of weather conditions, and with truck loaded, the manufacturers state. With air temperature less than 90° F., a temperature of zero can be held, they claim.

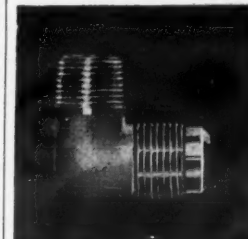
Total weight, including the Hercules body, Servel equipment, and gas engine is approximately 2,700 lbs. The body is manufactured and guaranteed by Servel, Inc.

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have been sold since 1891. During these 40 years they have been imitated in appearance, but never equalled in quality and performance. **GUARANTEED** to remove taste, color and odor. For Information Write **BUHRING WATER PURIFYING CO.** 40 Murray St., New York City
REPRESENTATIVES: Allen-Buhring Water Purifying Service, Chicago, Ill.; Boston Water Purifier Co., New York; Boston Filter Co., Boston, Mass.



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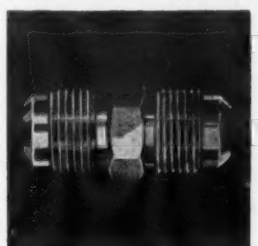


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COMMONWEALTH BRASS CORPORATION

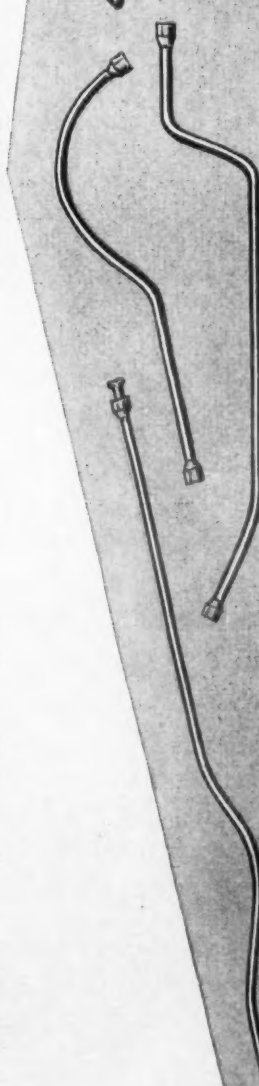
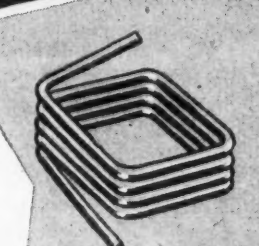
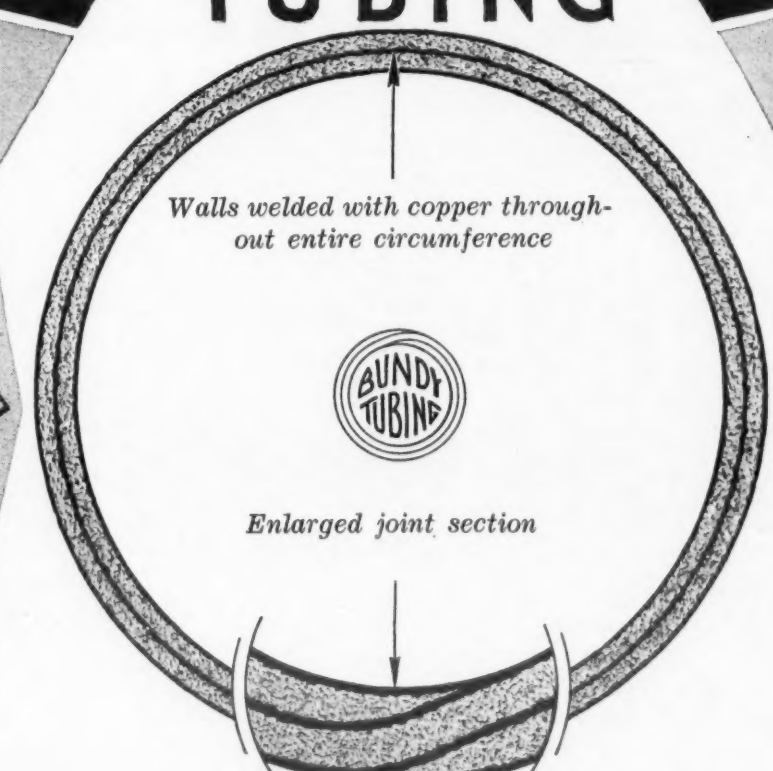
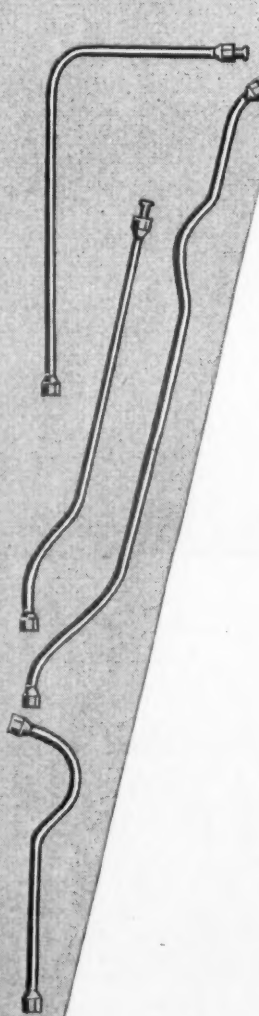
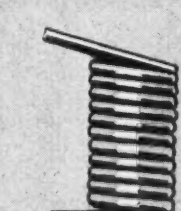
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Walls welded with copper throughout entire circumference



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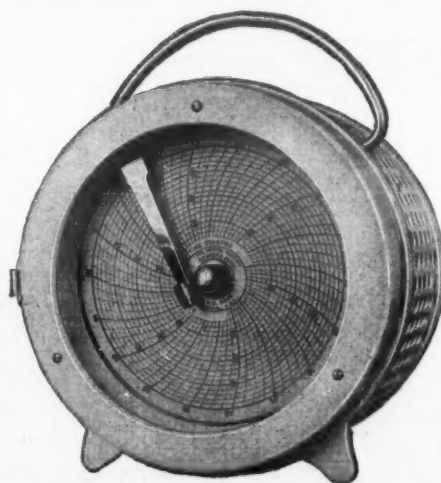
CHECK these Bundyweld Tubing characteristics against your requirements for refrigeration tubing—you will find every specification exactly met.

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Especially developed for this work is the Bristol's Handy Recording Thermometer . . . easily portable so that it can be placed in the unit to give an

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ENGINEERING SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published by

BUSINESS NEWS PUBLISHING CO.

550 Maccabees Building, Woodward Ave. and Putnam St.
Detroit, Michigan. Telephones: Columbia 4242-4243-4244

Subscription Rates:

United States and Possessions: \$2.00 per year;
three years for \$5.00

All Other Countries: \$2.25 per year; two years for \$4.00
Advertising Rates on Request

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Member, Audit Bureau of Circulations

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VOL. 5, No. 24, SERIAL No. 126, Part 3, July 29, 1931

Truck Refrigeration

SUCCESSFUL installations of mechanical refrigeration in auto trucks, as a means of preserving foods which demand low temperatures in transit, are being reported. Ice cream companies, especially, are finding that refrigerated trucks can solve the problem of delivering ice cream over a wide area, while packers have found them effective in maintaining even, low temperatures for meats.

The burden of this development has rested chiefly with engineers commissioned by the truck builders. Their ingenuity has been challenged by questions of insulation, how to eliminate the vibration which disturbed the somewhat delicate control apparatus, and how to propel the compressor with a motive power that would be trouble-free and economical.

The usual plan is to place the refrigerating machinery in a compartment directly behind the driver's seat, with vents to allow cross-ventilation.

Power Supply

Designs vary in the choice of the power source. Some employ a one, two, or four-cylinder gasoline engine to operate the compressor directly, using current from the truck's ignition battery to start the engine. Another method is to take power from the truck transmission, generate electrical power, and operate a conventional electric refrigeration system with it. Still another plan uses a gas engine to drive a generator, which in turn furnishes current for the electric refrigeration. In some instances, the compressor has been driven by a shaft connected with the fan belt of the motor truck itself.

Air-cooled condensing units are used, with modifications made in the valves to insure positive action in spite of the vibration from the truck. The condenser is cooled either by an auxiliary fan driven by the truck battery, or when a gas engine is employed, the same ventilation that cools it may be directed across the coils of the condenser.

Insulation, Temperature Control

Insulations have been selected which will not disintegrate or settle with the truck's vibration. Thermostatic control of the refrigeration equipment eliminates the need for attention from the truck driver. Temperatures in the insulated compartment may be held from zero to 50° F., depending upon the requirements of the food carried.

Most designs provide for refrigeration when the truck is in the garage by a separate electric motor which is arranged to drive the compressor by plugging in on the central station current.

The experience of a certain Detroit dairy, which uses a mechanically refrigerated truck, indicates that a unit can be practically trouble-free. This firm reports that over the three-year period in which its truck was used every day, the refrigeration equipment received but minor adjustments, while the gas engine was given an annual overhauling.

Manufacturers of refrigeration machinery, insulation people, suppliers of cooling units, truck body and chassis builders, as well as the prospective users in the food industries have been very attentive to the development of refrigerated motor trucks. Their combined activities are resulting in announcements by substantial companies of re-

frigerated trucks which may be expected to give good operation.

The advantages of economy and continuous operation of automatic refrigeration are appreciated by the food carrier who must employ some cooling means to preserve his stock in trade, and electric refrigerator manufacturers may well recognize the potential market for their equipment which the refrigerated truck promises.

On Our Bookshelves

"PATENT LAW FOR CHEMISTS, ENGINEERS AND EXECUTIVES"

Author: Fred H. Rhodes. Publisher: McGraw-Hill Book Co., Inc., 370 Seventh Ave., New York City. Pages: 207. Price: \$2.50. Publication Date: 1931.

MANY of the mysteries of the U. S. patent law are clarified in this new book by Fred H. Rhodes, professor of industrial chemistry at Cornell University. It was written expressly for chemists, engineers, and business men to whom the subjects of patents is interesting and important because of its relationship to their business and professional activities.

The volume treats chiefly the nature and scope of patents, and the extent of the protection afforded by them. He points out the distinction between inventions and discoveries. The conventional interpretation of the word discovery is something brought to light which existed before, but was not known until the discoverer found it. Such a discovery cannot be patented, because it does not partake of the nature of an invention, the author says.

"An invention is an idea—a concept—and not the actual material embodiment of that idea. An invention of a machine is a mental image, not a thing of steel and brass. The courts have ruled, however, that an invention is not completed until it has been embodied in tangible form," Mr. Rhodes states.

A patentable invention, he shows, must be an idea original in the mind of the inventor, and new and useful within the meaning of the statute. Every original and new and useful concept cannot be protected by a patent, unless it involves a certain amount of inventive faculty.

The author indicates what types of inventions are patentable, discusses the time element in taking out patents, and treats the subject of abandonment at some length.

Because of the fact that attorneys are usually employed to take out patents, the very involved processes of application are explained but briefly. He does show the form of application, and discusses the formulation of claims.

The rights conferred by patents are outlined, infringements, validity, and the rights of employers and employees shown when an employee completes an invention on the employer's premises. The work concludes with a discussion of patent policies and an appendix of patent forms.

Legal terminology is avoided as much as possible, most of the statements being made in language that is understandable to an engineer, chemist, or executive.

GLEANINGS FROM RECENT PERIODICALS

Traveling Ice Boxes

MORE THAN \$600,000,000 has been invested in refrigeration equipment for the handling of perishable commodities by the railroads of the United States, resulting in the widest kind of distribution of fruits, vegetables, fish and other perishable products. There are more than 150,000 of these "traveling ice boxes" in daily use, doing their job of aiding the health of the nation by making available to the consumer fresh fruits and vegetables at times when they would otherwise be "out of season."

While there are a few chemical refrigerator cars now in use, by far the large majority are of the natural ice type, and require regular re-filling while en route. The New Haven Railroad has two main icing facilities—one at Maybrook and the other at Boston—and uses more than 25,000 tons of ice a year for the icing of perishable products. Such cars must be serviced every 24 hours, the ice bunkers being filled up each time. The bunkers of the average car hold approximately 10,000 pounds of ice when full.

Careful check is kept on refrigerator cars while en route, and whenever one fails to reach the next icing station before the 24-hour period is up, arrangements are made to ice the car wherever it may be. It is therefore a fairly familiar sight to see an ice wagon drawn up alongside a railroad siding, with men picturesquely swinging ice up to the bunker hatch on the roof.

At the regular icing stations, however, the job is done much more efficiently from platforms which are on a level with the roofs of the cars, and it is possible to fill the ice bunkers at the rate of a car a minute.—New Britain, Conn., Record.

Incandescent Refrigerators

WHILE it has long been known that the temperature of the sunspots is lower than the incandescent surface of the sun, yet it is only recently that the reason for this sharp difference in local temperatures has been determined. The high internal temperature of the sun prohibits chemical reaction but does favor the disassociation of the electrons from the atoms. The atoms of the photosphere, being largely of hydrogen, are difficult to ionize, hence at the surface the proportions of ions is comparatively small. But at a depth of a few hundred miles within the sun we find that most of the hydrogen is ionized in connection with the other gases issuing through the area of the sunspot. A mass of gas issuing from the interior favors the recombination of the (H) protons with the atmospheric (H) so that sufficient heat would be developed to start an upward current. The column of gas would then continue to ascend by its momentum, expanding and cooling by its expansion so that eventually a cold current would spread out reducing the temperature locally. Thus, the very incandescence due to high temperature produces local refrigeration on the surface of the sun.—July, Siebel Technical Review.

Robbins & Burke Finishing Order Of 50 Trucks

(Concluded from Page 1, Column 1)

motor by direct belting of the gas engine and compressor reduced the weight from 1,000 lbs. to 500 lbs., and the cost in a similar proportion, he reports. The first mechanically refrigerated truck made by this company was built 11 years ago.

The bodies are insulated with sheet cork and Dry-Zero, Mr. Robbins says. The side panels are fabricated of Met-L-Wood, and are fitted with double sealed doors to the refrigerated compartments. The insulation is all sealed and water-proofed, he claims.

A body refrigerated by solid carbon dioxide has been developed by this company, and is being used in the delivery of Birdseye Frosted Foods. This equipment is mounted on a 1½-ton Chevrolet chassis, and is characterized by a French roof, rounded corners and side aprons. It has two separate compartments.

The refrigerated compartment is equipped with a Thermo Syphon system in which the carbon dioxide gas is circulated around the side walls in a gas-tight duct. When the gas returns to the solid carbon dioxide compartment it is pre-cooled and circulated around again, until its heat makes it so tight it rises to the top of the hatches and is exhausted through the top of the insulation.

They consume approximately 40 lbs. of solid carbon dioxide daily under average conditions, Mr. Robbins says, assuming a 24-hour day, and maintaining a zero temperature. The inside measurements of the bodies are 90 in. long, 70 in. wide, and 33 in. high.

WILSON DEVELOPS HAIR INSULATION FOR TRUCKS

CHICAGO—One of the recent additions to the long list of by-products afforded by packing house operations is the "Haircraft" insulation, made of animal hair, and sold by the Insulation Division of Wilson & Co., Inc.

Haircraft is 100 per cent hair, chemically treated, cleaned, and sterilized, according to Wilson engineers, then covered with a tough duplex craft paper treated with an inner lining of asphalt, and stitched every two inches. It is flexible and compressible, and will resume its normal form upon release, they claim.

The insulation has found considerable application in refrigerated freight cars and refrigerated auto trucks, Wilson engineers point out. It has been used in refrigerated freight cars of T. M. Sinclair & Co., Ltd., packers of Cedar Rapids, Iowa; the Union Refrigerator Transit Co.; the East Side Packing Co.; and Wilson & Co. itself.

Among the refrigerated truck owners employing Haircraft for insulation are the Drexel Farms, Chicago; Julia King's Candy Co., Chicago; Jacob Dold Packing Co., Buffalo; Mickelberry's; Hutson Freight Lines, Inc.; Silver Fleet Motor Express Co.; and the Hygrade Food Products Corp., Chicago.

Wilson research engineers recommend from one to six thicknesses of their insulation for maintaining temperatures in refrigerated trucks. Six layers are proposed when zero temperatures are desired, and fewer proportionately down to one layer, which is supposed to maintain a temperature from 55 to 60° F.

CHICAGO-DETROIT TRUCK IS COOLED BY FRIGIDAIRE

DETROIT—For seven months, the Liberty Highway Co., operator of 100 transport trucks in Michigan, Illinois and Ohio has been using one Gramm-Burstein truck and Fruehauf trailer, equipped with a Frigidaire cooling unit, for hauling perishable products between Detroit and Chicago.

At present, this is the only refrigerated truck being used by the company, although officials hope in the future to expand their refrigerated truck business, according to J. F. Graves, Detroit agent for the company.

The Frigidaire condensing unit is powered by a Novo gasoline engine. The refrigerating machine was shipped to Lansing, Mich., and mounted on the standard engine base by the Novo Engine Co. there.

When unloaded, the truck and trailer weigh 12,000 pounds. A load of nine tons can be carried. Mr. Graves says that a temperature of 45° F. can be maintained in the trailer en route. Cork insulation is used.

Products chiefly carried in the truck are butter, meat, cheese, margarine and poultry. The firm's charges are slightly under regular rail rates, but assessments are made for pick-up and door delivery of shipments under one ton.

The company runs trucks to Cleveland; Chicago; Pontiac, Mich.; Cincinnati; Dayton; Jackson, Mich., and Akron, Ohio.

GENERATOR POWERS TRUCK REFRIGERATOR

CHICAGO—To supply electric power for refrigerated trucks, Thompson & Jameson Corp. of this city has developed a generating unit driven by a power take-off from the transmission of a truck, and designed to supply a constant direct current voltage regardless of the engine speed. The equipment is known as the T & J Dual Control Variable Constant Voltage Generator.

Motive power from the take-off at the transmission is transmitted by V-belts to a direct current generator mounted on the truck floor in a compartment behind the driver's seat, according to L. J. Schraack, engineer.

Voltage of the generator is kept constant by a patented control device which utilizes the lateral motion of a revolving governor to vary an electrical resistance in the field circuit of the generator. The control mechanism is mounted in a steel box above the generator.

The 110-volt direct current potential furnished by the generator is connected to the refrigerating equipment, which may be of any standard make, officials of the company say. The a. c. motor furnished with the condensing unit is replaced by a d. c. motor, the a. c. motor mounted on a shelf above the compressor, and is belted to the d. c. motor, using it as a counter-shaft to supply motive power when the truck is in the garage.

On the back wall of the compartment is a throw-over switch with a c., d. c., and "off" positions, an enclosed automatic d. c. starter, and the cord and plug for plugging in on house current.

The first machines were built in 1927 for use with Frigidaire equipment, Mr. Schraack reports. Since then installations have been made for the Fisher Ice Cream Co., Oak Park, Ill.; the Thompson Ice Cream Co.; the Chapell Ice Cream Co.; the Belmont Ice Cream Co.; Hydrox Corp.; the Columbia Ice & Ice Cream Co.; the North-Western Packing Co.; and John Novotny, meat distributor, all of Chicago.

EDISON'S MULTIPLE JOBS USE BAR-TYPE MANIFOLDS

(Concluded from Page 1, Column 4)

bar-type manifolds using separate liquid and suction lines for each refrigerator. Mr. Wetherbee believes that this plan is safer than using the riser method because it means fewer joints in the tubing, is simpler, and taking one refrigerator off the system is done by merely shutting off the valve at the manifold. Moreover, the cost of labor for making the installation is less, he claims.

Commonwealth Edison engineers favor the use of hot galvanized iron pipe coils for certain single refrigerator commercial installations. These coils are used with a high side float and methyl chloride. They are economical, easy to install, and occasion very little trouble, Mr. Wetherbee states.

In these methyl chloride installations, 10 per cent of sulphur dioxide is added. He finds that this combination has the same properties of sulphur dioxide in divulging a leak by odor or ammonia-dipped rag, and approximately the same temperature-pressure characteristics as methyl chloride.

Calcium chloride driers are installed in all new apartment and commercial jobs, and in old installations whenever a service man attends them.

When equipment for new commercial and apartment house installations is all in place, the systems are first placed under 150 lbs. of nitrogen gas pressure and the gauge observed to see if the system holds pressure. Then before the system is charged with refrigerant, a sulphur dioxide pressure is applied and the installation men look for leaks by the odor and ammonia rag methods.

SOLID CARBON DIOXIDE USED IN FOUR EXPRESS TRUCKS

DETROIT—Solid carbon dioxide is the cooling agent used in the four refrigerated trucks now being operated by the Express Transportation Co. between Detroit and Chicago.

The company used a total of 22 trailers, manufactured by Fruehauf Trailer Co. of Detroit, and 18 International Harvester trucks, refrigerated trailers having been used for 18 months.

Each trailer is insulated with Dry Zero, two and one-half inches thick. One hundred lbs. of solid carbon dioxide are used on each of the 300-mile trips, according to A. Gellatly, secretary-treasurer.

An unloaded truck and trailer weigh 20,000 lbs., and loads of 18,000 lbs. per axle are usually carried. Mr. Gellatly states that a temperature of 45° F. can usually be maintained throughout the entire trip, provided the products being shipped are loaded at that temperature.

Butter, meat, poultry, yeast, margarine, mayonnaise and cheese comprise the principal shipments.

The firm charges regular rail rates for all shipments, pick-up and delivery service to exact destinations involving no extra charge.

LATEST REFRIGERATION PATENTS

ISSUED JULY 7

1,813,096. TUBE EXPANDER AND METHOD OF EXPANDING TUBES. Karl A. Stenner, Farmington, Conn. Filed Aug. 14, 1929. Serial No. 358,918. 8 Claims. (Cl. 153-80.5.)

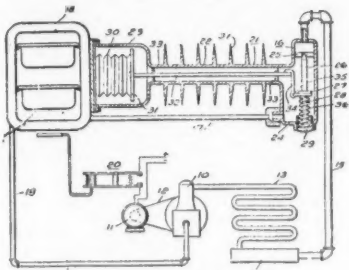
1. A tube expander including a tapered mandrel, a plurality of bushings outwardly shaped to fit a tube and inwardly shaped to fit a mandrel, and a spacer located between said bushings.

2. The process of expanding a tube into tight contact with surrounding fins, that consists in placing within said tube a number of expandable bushings outwardly shaped to fit said tube, placing spacer between each two adjacent bushings, placing a number of tapered mandrels fitted to holes within said bushings, applying force to the larger end of the outer mandrel, loosening the mandrels, moving the mandrels and bushings endwise within the tube to new positions, and again applying force to the larger end of the outer mandrel.

1,813,149. ICE SCORING MACHINE. John Q. Daugherty, Electra, Tex. Filed Sept. 9, 1930. Serial No. 480,752. 11 Claims. (Cl. 125-13.)

1,813,168. REFRIGERATING APPARATUS. Milton Kallscher, Mansfield, Ohio, assignor to Westinghouse Electric & Mfg. Co., a Corporation of Pennsylvania. Filed Aug. 14, 1929. Serial No. 385,880. 2 Claims. (Cl. 62-8.)

1. In a refrigerating apparatus, an evaporator, an expansion valve for controlling the flow of refrigerant medium through said



1,813,168

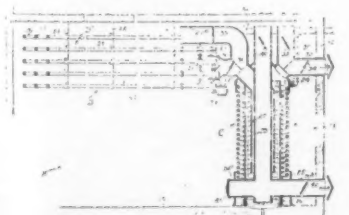
evaporator, said valve comprising a sealed casing having enlarged end portions and an intermediate tubular portion, one of the enlarged end portions being adjacent the evaporator and in thermal contact therewith, a gas-filled expandable member in said adjacent portion, a valve and valve seat in the opposite end portion, and operative connections between said expansion members and said valve, said connections passing through the tubular portion.

1,813,187. MEANS FOR REFRIGERATING AND CONTROLLING THE CIRCULATION OF AIR IN COLD STORAGE ROOMS. Charles A. Moore, Edina, Minn. Filed Jan. 23, 1929. Serial No. 334,511. 14 Claims. (Cl. 62-99.)

1. The combination with a room of a refrigerating and air circulating element forming a baffle spaced from the side walls at and depending from the ceiling of the room, another similar element extending from said first element in a direction toward one of said side walls, and a conduit open at its upper side along its length beneath said latter element and leading toward said first element.

1,813,188. AIR CONDITIONING AND CIRCULATING APPARATUS FOR COLD STORAGE CHAMBERS. Charles A. Moore, Edina, Minn. Filed June 3, 1929. Serial No. 368,150. 8 Claims. (Cl. 257-18.)

1. In combination, a structure providing a chamber, an overhead bank of refrigerating coils disposed longitudinally of the chamber, centrally thereof, near the ceiling, the coils being relatively arranged to provide upper and lower channel-like passageways extending longitudinally of the bank, the former opening upward and the latter opening downward, an appliance at one end of the



1,813,188

bank of coils including two upright conduits and means for reducing the temperature of the air therein, one conduit communicating at its upper end with the outer atmosphere and the second conduit communicating at its lower end with the lower portion of said first conduit, the upper portion of the second conduit terminating in two branches, one communicating with the upper channel-like passageway in the bank of coils and the other communicating with the lower channel-like passageway therein, and a fan arranged to draw air into said second branch both from said first branch and from said second conduit and mix it and blow it into said lower passageway.

1,813,250. MEANS FOR CONDITIONING AND CIRCULATING THE AIR IN COLD STORAGE ROOMS. Charles A. Moore, Edina, Minn. Filed Feb. 7, 1929. Serial No. 338,181. 16 Claims. (Cl. 62-103.)

13. In combination, a structure forming a chamber, a bank of refrigerant conductors extending along the chamber near the ceiling, and formed to provide a vertical central port extending along the same, and a fan arranged to blow air into said port longitudinally thereof from one end of the bank of conductors.

1,813,335. REFRIGERANT. Leonard Kay Wright, Jackson Heights, N. Y. Filed Oct. 7, 1927. Serial No. 224,766. 5 Claims. (Cl. 62-179.)

1. A refrigerating process comprising adsorbing allylene, driving off the allylene

from the adsorption agent, condensing the allylene, and evaporating the condensed allylene to produce refrigeration.

1,813,336. REFRIGERANT. Leonard Kay Wright, Jackson Heights, N. Y. Filed Nov. 8, 1927. Serial No. 231,994. 2 Claims. (Cl. 62-179.)

1. A refrigerating process comprising adsorbing betabutylene alone, heating the adsorbent to drive off the refrigerant, condensing the refrigerant so driven off, and reducing the pressure of the condensed refrigerant to cause evaporation.

1,813,486. REFRIGERATING UNIT. Lewis W. Eggleston, Detroit, Mich., assignor to American Radiator Co., New York, N. Y., a Corporation of New Jersey. Filed Nov. 8, 1928. Serial No. 317,948. 1 Claim. (Cl. 62-95.)

A refrigerating unit formed as an integral casting comprising a body portion including a series of flat tubular portions arranged side by side in spaced relation, a header at one end of said body portion common to the lower ends of said tubular portions, a float-chamber at the opposite end of said body portion having openings therein communicating severally with said tubular portions, and a series of transverse ribs arranged in spaced relation and extending laterally from one side wall of said body portion intermediate said float-chamber and said header, and vertical ribs arranged in spaced relation and extending from the opposite side wall of said body portion, substantially as specified.

1,813,692. AIR CONDITIONING APPARATUS. Samuel M. Anderson, Hyde Park, Mass., assignor to B. F. Sturtevant Co., Hyde Park, Mass., a Corporation of Massachusetts. Filed June 11, 1929. Serial No. 370,069. 3 Claims. (Cl. 138-9.)

1. Air conditioning apparatus comprising a plurality of air conditioning units including a humidifier unit, a propeller fan for each unit, the humidifier unit being disposed between successive fans, and means located between the fans for damping the spin velocity introduced into the air stream of the first fan.

ISSUED JULY 14

1,813,960. REFRIGERATING APPARATUS. Herman Scharnagel, Tompkinsville, N. Y., and Matthew H. Loughridge, Bogota, N. J., assignors to Harry W. Dyer, New York, N. Y. Filed Sept. 29, 1926. Serial No. 138,444. 5 Claims. (Cl. 62-116.)

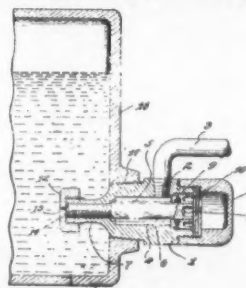
1. A refrigerating system as described comprising a cabinet with an evaporator therein, said evaporator mounted on a slide for sliding into and out of said compartment, a condenser located outside said cabinet, and piping connecting said evaporator with said condenser, said piping arranged to expand like a lazy-jack to permit said evaporator to move on said slide.

1,813,971. TUBING AND METHOD OF FORMING THE SAME. Samuel W. Taylor, Detroit, Mich., assignor to Copeland Products, Inc., a Corporation of Michigan. Filed July 30, 1928. Serial No. 296,111. 5 Claims. (Cl. 153-79.)

1. The method of forming an attaching end portion on an open ended tube which comprises inwardly tapering an end of said tube, then bending said inward taper within the tube to form double thickness end, and outwardly tapering said end.

1,813,979. FLOW CONTROL FOR REFRIGERATING SYSTEMS. Frank R. West, Detroit, Mich., assignor to Rice Products, Inc., Detroit, Mich., a Corporation of Michigan. Filed July 8, 1928. Serial No. 121,088. 13 Claims. (Cl. 62-126.)

1. A device of the class described for refrigerating systems, comprising relatively movable elements having interfitting thread-



1,813,979

ed portions cooperating to form a helical passageway for conducting the refrigerant to the cooling unit, and means for moving one of said elements to vary the length of and resistance to the flow of refrigerant through said passageway.

1,813,987. REFRIGERATING APPARATUS. James W. Carl, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed May 30, 1928. Serial No. 281,610. 4 Claims. (Cl. 62-95.)

1. A refrigerating element for refrigerating apparatus comprising a header forming a reservoir for liquid refrigerant, transverse fins extending laterally beyond the header and a plurality of sets of conduits connected to the header in parallel circuit relation, the conduits being radially arranged with respect to the header, both sides of each fin being in intimate thermal association with a set of conduits.

1,813,999. REFRIGERATING APPARATUS. George F. Hofferberth, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed April 24, 1930. Serial No. 447,008. 4 Claims. (Cl. 62-1.)

1. A mechanical refrigerator having a cooling device, a drip container having a slide-way and adapted to be placed under said cooling device, a shelf for supporting said container, and a member carried by said shelf forming a guideway which cooperates with said slide-way for guiding and locating said container.

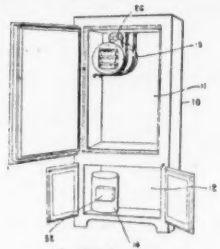
1,814,001. REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed May 30, 1928. Serial No. 281,608. 2 Claims. (Cl. 62-95.)

1. A refrigerating element for refrigerat-

ing apparatus comprising a header forming a reservoir for liquid refrigerant, a plurality of duct loops for circulating refrigerant depending from the header and connected thereto in parallel circuit relation, and a hollow fin surrounding each duct loop, said fins being adapted to contain liquid circulating medium in intimate thermal association with the ducts.

1,814,013. REFRIGERATOR CONTROL MECHANISM. Matson C. Terry, Mansfield, Ohio, assignor to Westinghouse Electric & Mfg. Co., a Corporation of Pennsylvania. Filed Feb. 21, 1927. Serial No. 169,895. 4 Claims. (Cl. 62-4.)

1. The combination with a refrigerating machine having a compressor, a motor for driving the compressor, a fluid tight casing enclosing the motor, a condenser, a fan for circulating air over the condenser, a motor for driving the fan, both the compressor



1,814,013

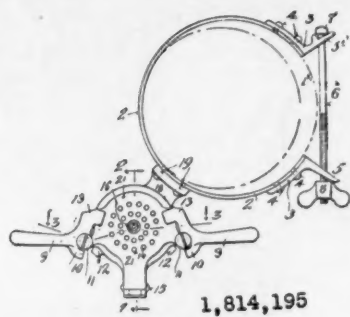
motor and the fan motor being provided with starting and running windings connected in parallel with the source of electrical energy, and control means for automatically opening and closing the circuit between the motors and the source of electrical energy, of a switch disposed outside of the compressor motor casing for opening or closing the circuit through the starting windings of both the fan motor and the compressor motor, and an electromagnet for actuating said switch, said electromagnet being energized by the flow of current created upon the closing of the circuit between the source of electrical energy and the windings of both motors by the automatic control means.

1,814,114. REFRIGERATION SYSTEM AND METHOD. Walter Light Bodman, New York, N. Y., assignor to The Insulation Corp., a Corporation of Delaware. Filed Nov. 21, 1925. Serial No. 70,506. 1 Claim. (Cl. 62-92.)

A refrigeration system comprising a source of pressure gas supply, a refrigeration box, a needle valve controlling the flow of gas from the source of supply to the box, means for periodically opening and closing the needle valve, and means for heating the stem of the valve.

1,814,195. APPARATUS FOR MAKING CARBON DIOXIDE ICE. Norman Montgomery Thomas, Brooklyn, N. Y., assignor to The Solid Carbonic Co., Ltd., New York, N. Y., a Corporation of Delaware. Filed Feb. 15, 1929. Serial No. 340,081. 14 Claims. (Cl. 62-121.)

1. A refrigerating press fixedly mounted upon an adjustable metal band for securing said refrigerating press to a liquid carbon dioxide cylinder, said press comprising means for freezing liquid carbon dioxide into snow in wafer form and seal breaking



1,814,195

means secured to said press for breaking any frozen condition that arises when the press is filled.

1,814,272. REFRIGERATOR DOOR CONSTRUCTION. Virgil P. Warren, Atlanta, Ga. Filed Dec. 28, 1928. Serial No. 328,469. 5 Claims. (Cl. 20-35.)

2. In combination with framework having an opening therethrough leading to a compartment therein, a door for said opening hinged to said framework and provided with a groove in the striking edge thereof, and means inserted in said groove to bend said striking edge arcuately.

1,814,280. REFRIGERATION SYSTEM AND METHOD. Walter Light Bodman, New York, N. Y., assignor to The Insulation Corp., a Corporation of Delaware. Filed Mar. 25, 1926. Serial No. 97,393. 7 Claims. (Cl. 62-46.)

1. A refrigerator having a cooling chamber and a preserving part, a closed container having a frozen refrigerant therein in said cooling chamber, means directing a circulation of air through the preserving part of the refrigerator and in proximity to but out of contact with the refrigerant container, and means permitting a portion only of the air thus circulating to circulate in and out of the cooling chamber and thus come into direct contact with the refrigerant container.

1,814,315. REFRIGERATOR FOR VEHICLES. Charles D. Koch, Torresdale, Pa., assignor to Keystone Aircraft Corp., Bristol, Pa., a Corporation of Delaware. Filed Aug. 15, 1928. Serial No. 299,857. 12 Claims. (Cl. 62-90.)

1. In combination with an airship a device of the character described including a structure having two ends opening through the skin of an airship or the like at two different points thereon forming an air duct and means for introducing a volatile liquid to the interior of the air duct.

1,814,661. REFRIGERATOR CLOSURE. Gebhard C. Bohn, St. Paul, Minn. Filed Apr. 28, 1928. Serial No. 273,548. 3 Claims. (Cl. 20-35.)

3. A refrigerator door having a metal plate with a recess about the edges thereof, a collapsible frame comprising a pair of end members having a bead on their outer edges and ends, and a groove on their inner edges and a pair of longitudinal members mounted between said end members and having tongue and groove engagement therewith, said longitudinal members being slidably laterally to be positioned both on one pair of end members, leaving the other pair free for removal.

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WELDING PRODUCTION DOUBLED IN 14 DAYS

By Francis A. Westbrook, M. E.
Consulting Engineer,
Center Conway, N. H.

THE manufacture of automatic domestic refrigerating units is an industry which has expanded so rapidly that one firm was recently compelled to double its production in two weeks.

The particular unit whose production had to be speeded up operates at a pressure of 250 lb. per sq. in., and operating experience has shown that its oxy-acetylene welded joints stand up in a very satisfactory manner.

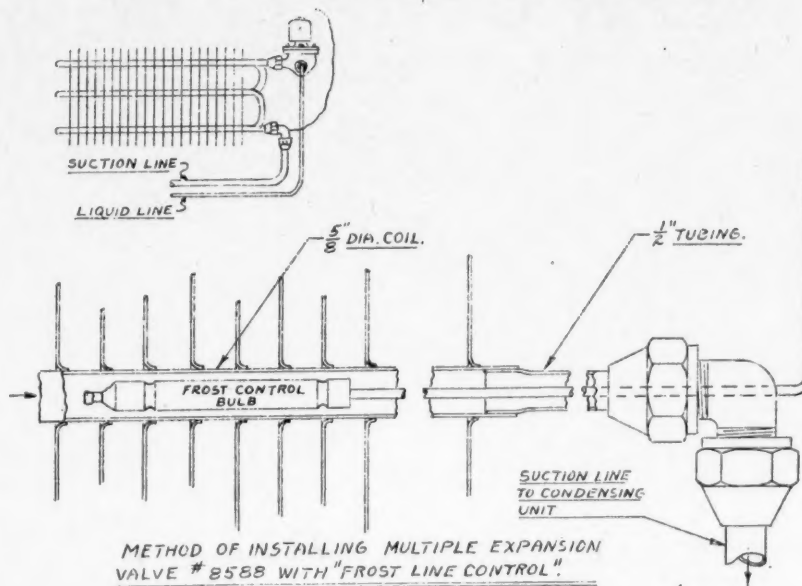
The owners of the plant called in oxy-acetylene service operators to assist in this phase of the work. A suitable building with wood framework and cor-

rugated iron siding was erected in a week. The installation of 54 welding stations was completed in a few more days. This included running the oxygen and acetylene lines from the acetylene generator house and the oxygen manifold. The machinery for cutting the tubing and bending it into the necessary shapes, and the jigs for holding the parts during welding, were installed in the second week.

Meanwhile, a new force of welding operators was being trained. This was done by four instructors, two working in the daytime and two during the night. The welding on the refrigeration units is a delicate operation, consisting as it does of joining tubing of from 12 to 17 gauge to form an assembly which must pass a pressure test of 900 lb. per sq. in.

In spite of the delicacy of the work, the welding service operator, by using procedure control methods, was able to train 125 hitherto inexperienced men satisfactorily within the time available.

New Control Bulb Hook-up



Copeland engineers are now placing the thermostatic control bulb inside the tubing of Copeland-Larkin cooling coils in order to extend the refrigeration effects of the unit to the suction line end of the coil.

COPELAND BULB NOW PLACED INSIDE COILS

MT. CLEMENS, Mich.—The control bulb of the new "Bulb-in-Coil" valve control just announced by Copeland Products, Inc., here, is placed inside the Copeland-Larkin commercial cooling coils, according to W. D. McElhinny, vice president.

The object of this new development by Copeland engineers was to make possible the utilization of refrigeration effects over the entire surface of the coil. Refrigerant entering the coil through the expansion valve from the liquid line begins its cooling effect at that point, extending throughout the coil until it reaches the last turn and the suction line.

When the desired low temperature is produced at this point, they point out, the whole coil is refrigerated properly, and the turning off of the entering refrigerant by the action of the control bulb is made at the right moment. This new design will also prevent the accumulation of frost on the suction line, and should provide more uniform temperatures, since the air in the refrigerator cannot influence the temperature of the bulb, Copeland engineers claim.

"Heretofore it has been necessary to adjust the control so that when the predetermined temperatures are reached, the refrigeration is automatically shut off, and at the same time, will not cause the expansion tubing to frost back when the refrigeration starts up again. To do that it was necessary to set the expansion valve so that part of the efficiency of the coils was lost. By placing the bulb in the coil, enough refrigerant is allowed to flow through, so that the entire surface of the coil is utilized. This forces the refrigerant to the extreme end of the tube in the coil, thereby getting the benefit of the entire coil," they state.

CENTURY PRODUCING NEW OIL BURNER ACCESSORY

CEDAR RAPIDS, Iowa—The Century Engineering Corp. has started production on the new gas conversion head which was exhibited for the first time at the Oil Burner convention.

The gas conversion head has been designed to replace the oil nozzle. It fits in the present manifold without changing the burner other than the application and piping necessary for the hook-up.

The gas enters a mixing chamber inside the burner manifold and is mixed with air from the blower through an air adjuster port which is a part of the gas burner head.

Ignition for the gas burner is obtained by an electric spark with the use of the same ignition transformer with which the oil burner was originally equipped, and eliminates the necessity of a gas pilot commonly used on the average type of gas burner.

O'KEEFE & MERRITT EXPAND

LOS ANGELES, Calif.—Within the past month, O'Keefe & Merritt, Pacific Coast manufacturers of electric refrigerators, gas stoves, and radiators, began construction of a new one-story brick addition to their factory on E. Ninth St., Los Angeles.

The present plant covers approximately five acres of ground, while the new addition will cover 33,000 sq. ft. of floor space which is to be used entirely for the refrigeration line. It will be of the "saw-tooth" type of construction. The biggest production at present is in the domestic refrigerators, according to officials of the company.

ARMSTRONG CORK UNITES CINCINNATI OFFICES

CINCINNATI, Ohio—All the local branch sales offices and warehouses of the Armstrong Cork Co., manufacturers of linoleum, rugs, insulation materials, and cork products, have been consolidated at 232 W. Seventh St.

The divisions affected and the quarters from which each moved are as follows: Armstrong Cork Co., floor sales division, 538 Dixie Terminal Bldg; Armstrong Cork & Insulation Co., insulation sales division, 1015 Broadway; Armstrong Cork Co., cork sales division, 1017 Broadway. A recently organized sales unit of the company, known as the Temlok dealer sales division, will also be located at the new office.

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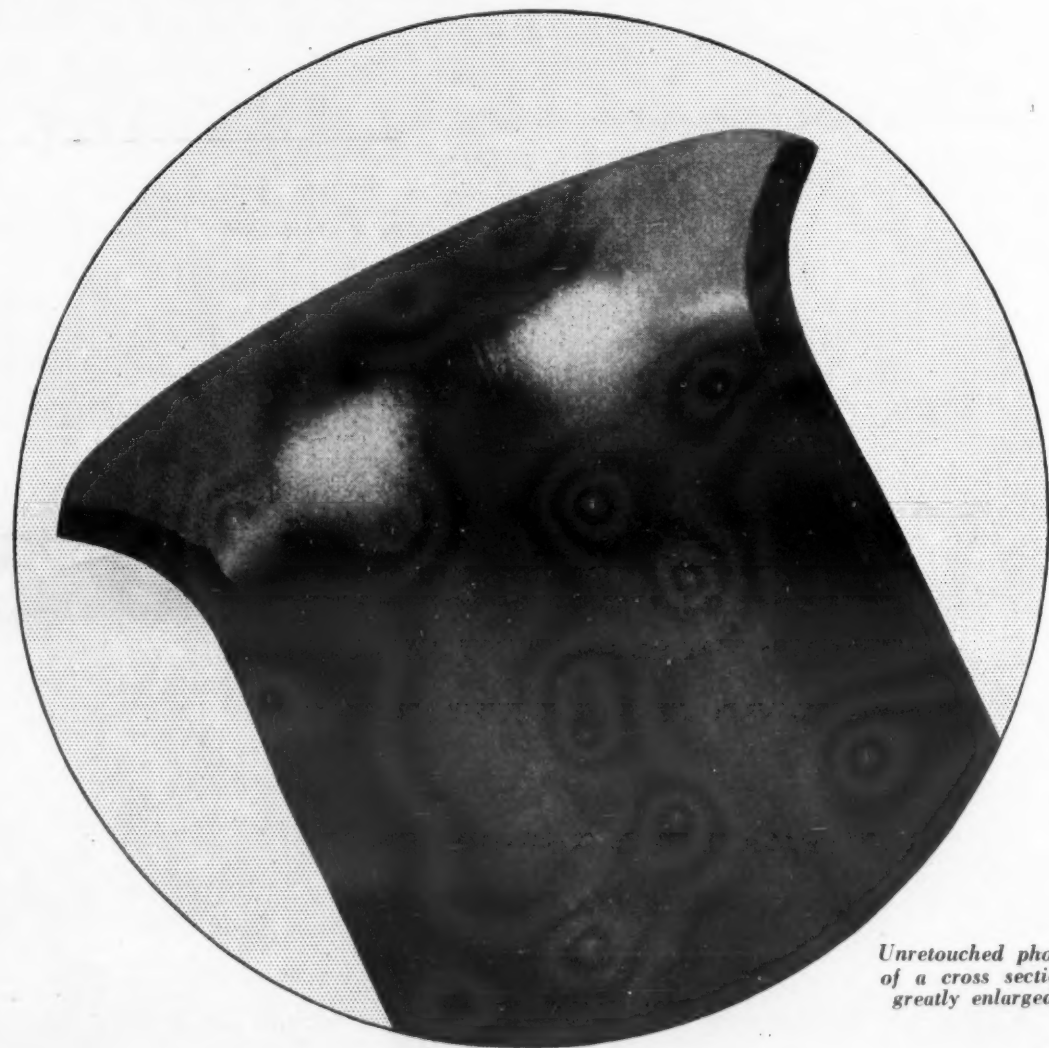
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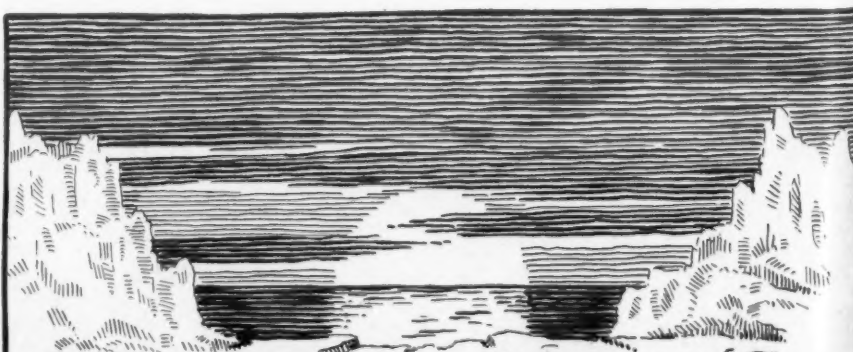
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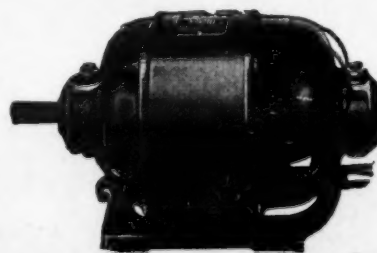
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SERVICE HINTS

By FRANK W. GRAY

It is characteristic of refrigeration service that the majority of service calls occur in hot weather. There is no apparent reason why spells of hot weather should bring more service calls than cool weather if equipment is correctly installed and estimated to carry the load under heat conditions.

Calls to service domestic equipment do not seem to vary with outside weather conditions. It is mainly in the commercial field that hot weather service develops. One reason for this is that many refrigeration dealers, determined to meet price competition, install compressors which are too small for the job under all weather conditions.

Another reason is that many refrigeration engineers persist in hooking up cooling units of any and every temperature requirement in multiple systems, with the result that hot weather makes coil temperature adjustments necessary.

Other service engineering mistakes occur when equipment is installed in various out-of-the-ordinary jobs with which the service men have had no previous experience. Such installations as brine circulating systems, marine jobs, ice cream fountain conversion, automobile truck installations, etc., are often more a source of loss than profit.

The engineering calculations involved in estimating equipment for brine circulating systems is a science in itself. The writer knows of several attempted installations in dairies where milk aerators were to be cooled by brine circulation, and where costly engineering mistakes were made in estimating the brine capacity needed to cool several hundred gallons of milk down to a low temperature in a short space of time.

Ice cream fountain conversions are very particular jobs. Fountains of the older vintage were designed to use ice, and must be practically rebuilt in order to operate with mechanical equipment. The problems of cooling the water, the syrups, and soft drinks, in addition to the refrigeration required for the ice creams of various flavors, make this type of job rather complicated.

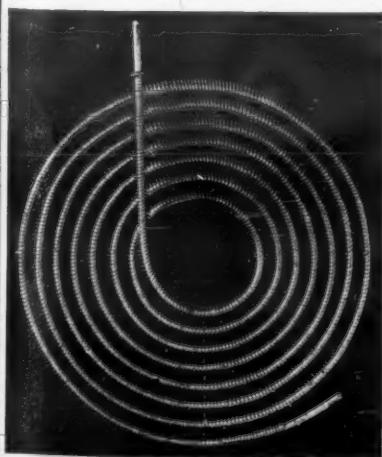
When a conversion job is attempted, it is well to have an experienced ice cream fountain technician on hand to do the necessary reconstruction in the interior of the fountain.

Installations in automobile trucks, on pleasure boats, etc., have a habit of ceasing to operate when no service is available. Much expense to refrigeration dealers has resulted from attempting to sell and install unusual and special jobs. It is much cheaper to let the other fellow do the experimenting. The ordinary every-day jobs which the service engineer installs according to standard and proven methods have complications enough, without looking for more unusual operating conditions.

A company which builds display counters for electric refrigeration use recently installed a number of cases in which a pronounced odor developed soon after they were put into operation. Considerable investigation was necessary to determine the cause of this odor. No leakage of refrigerant was found, the food products stored in the cases were not of a type to cause such an odor, and no brine was used in the installation.

Finally it was discovered that the glue used to seal the insulation against the infiltration of moisture was of an asphalt compound which, when in contact with moisture, gave forth an insidious odor that had found its way into the cases.

It became necessary to rebuild these display counters in order to eliminate the odor. Other cases have occurred where a sealing medium, or certain types of insulating materials, have caused odors which have been blamed upon the mechanical refrigeration equipment. It is well for service men to be aware of this possible source of odors.

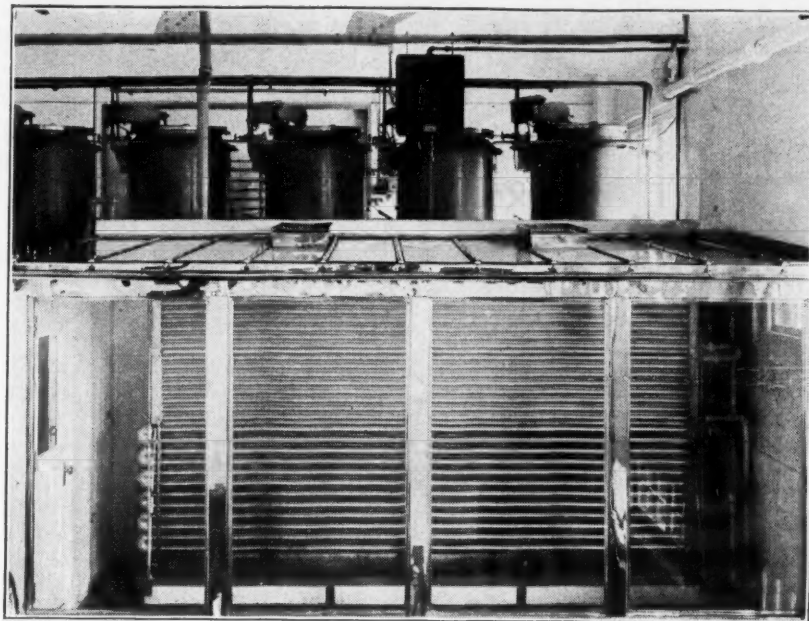


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Ammonia surface cooler in the Henry Kart Dairy, Buffalo

BUFFALO DAIRY INSTALLS REFRIGERATION EQUIPMENT

BUFFALO, N. Y.—When the Henry Kart Dairy, Inc., 2990 Main St., was formally opened for public inspection, the week of June 21st, the part played by electric refrigeration in the modern milk plant was graphically portrayed. The Creamery Package Mfg. Co., through its Buffalo office at 14 Ellicott St., installed the following refrigerating equipment in the dairy:

A walk-in cooler, 30 ft. square and 12 ft. high, in which 10,000 quarts of milk are stored, is equipped with a Creamery

Package cabinet type cooling unit, which maintains a temperature of 35° F. throughout the room.

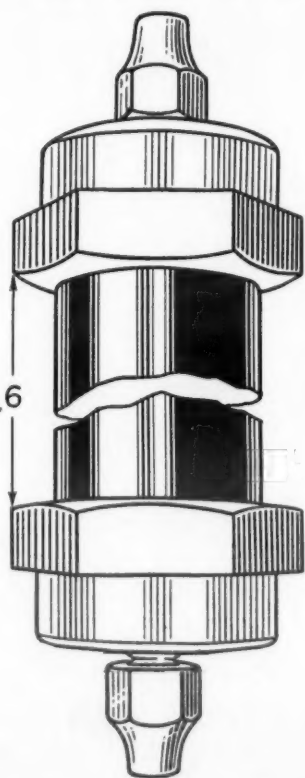
A glass-enclosed combination water and ammonia surface cooler, cools the milk after pasteurization. The hot milk, fresh from its 30-minute holding in the five 100-gallon pasteurization tanks, first runs over the water section of the cooler where its temperature is reduced from 145° to 80° F. It next comes in contact with the ammonia section where the temperature is further reduced to 36° F.

The flow of ammonia in the cooler is controlled by a Creamery Package liquid and suction pressure control, synchronized with a blower unit in a box, and controlled by a thermostat.

The Rice Refrigerant Dryer-Filter

For Use With Methyl Chloride, F-12, Iso-Butane, Freezole, Ethyl Chloride or Other Non-Corrosive Refrigerants.

Saves Time - Money - Worry



Consider These Outstanding Advantages of the Rice Dryer-Filter:

1. It is easily made tight without the use of shellac, litharge, or other sealing compound.
2. It is easily opened for examination of contents or for refilling.
3. It is easily refilled in the field if desired.
4. It can be easily and repeatedly refilled without injury or wear.
5. It has no screws, bolts, or nuts.
6. Its improved strainer assembly eliminates the possibility of calcium chloride or any other particles entering the refrigeration system.
7. It is designed and made to give years of satisfactory service.

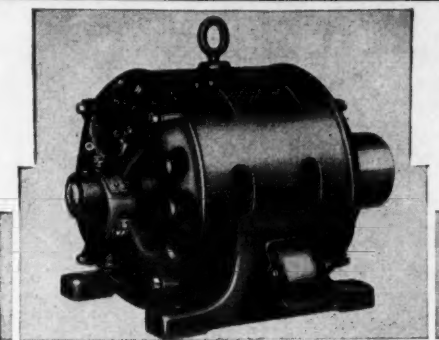
You may insure against moisture or dirt in any refrigerating system by using a RICE DRYER-FILTER:

- (a) Whenever moisture or dirt is present or suspected in the system.
- (b) Before starting up any new installation.
- (c) When adding refrigerant to a system.

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C. E. Rice Company
331 Dwight St., Springfield, Mass.

THEY KEEP A-RUNNING



5 Horse Power Century Type RS Repulsion Start Induction Single Phase Motor

For More Than 27 Years—

the "Keep a-Running" ability of Century Single Phase Motors, brush-lifting type, has been amply demonstrated . . . in practically every type of installation . . . in all parts of the world . . . under the most severe operating conditions . . . They are particularly desirable where high starting torque and low starting current are of primary importance.

Built in standard sizes from 1/4 horse power to 40 horse power.

CENTURY ELECTRIC COMPANY

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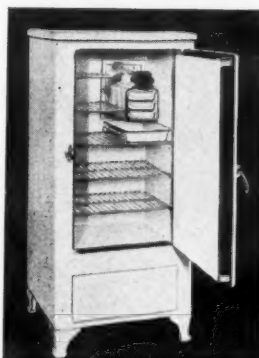
40 U. S. and Canadian Stock Points and More Than 75 Outside Thereof



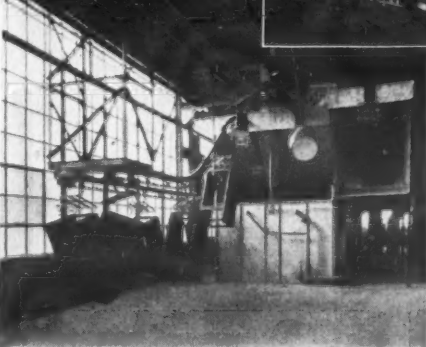
FOR MORE THAN 27 YEARS AT ST. LOUIS

SERVEL Finish is Protected by BONDERITE

With other Advanced Construction Features, the New, Simplified Hermetics have this Added Quality



The hermetically sealed mechanism of these one-a-minute Servels incorporates advanced engineering principles making for simplicity and ability to give long "care-free refrigeration" service.



From the huge 29-acre Servel plant at Evansville, Ind., comes a Bonderized refrigerator every 60 seconds of the working day!

blister. If accidental abrasions occur, rust cannot spread under the lacquer, causing it to peel.

Corrosion—blemishing and destructive—is defeated!

Servel cabinet panels are given a 10-minute dip in Bonderite solution before their pyroxylin finish is applied. After a quick water rinse, they emerge chemically clean, with their surface transformed to a rust-proofing phosphate which is perfectly uniform and slightly absorbent. The pyroxylin adheres upon application and is securely anchored upon drying.

Leading manufacturers of a vast number of products with sheet metal parts use the Bonderizing process. It represents a superior metal finishing method and constitutes a positive

sales asset for the finished product. Automobiles, electrical goods, building hardware, metal furniture, radios are given this same protection against corrosion as Servel refrigerators.

Bonderizing can be adapted to either mass or small production methods. It is suited to overhead conveyor line or stationary dip-tank installation, and requires no skilled labor. Bonderite powder, which is added to boiling water in making the Bonderite solution, is low in cost and easily handled.

We shall be glad to supply complete information relative to the application of Bonderizing to any particular requirements. Write now—today—for the descriptive book — "Bonderite."

Bonderite
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